

# U.S.I. JOURNAL

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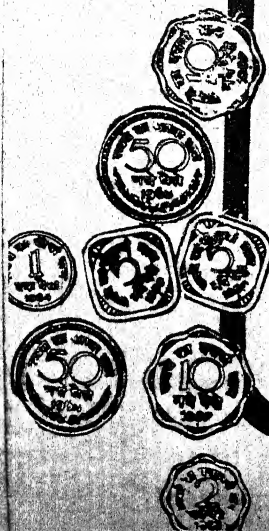
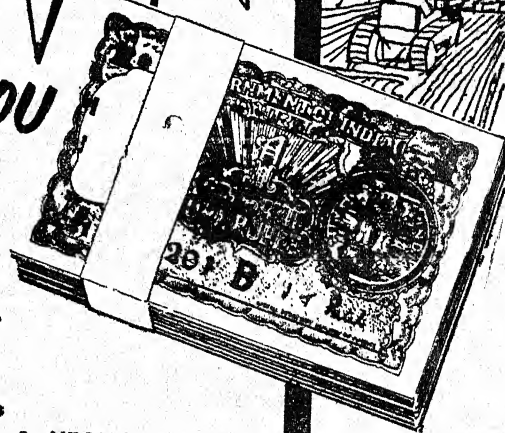
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ESSAY COMPETITION (A)

“Authoritarian institutions and practices are yielding to democratic concepts at all levels of society.” Discuss the implications of this socio-economic change with particular reference to the relationship between officer and man, and to the aspects of discipline and motivation in the Services.

I

IF WE REST WE RUST

BRIGADIER J NAZARETH

ONE of the current beliefs perpetuated through inertia in thinking is that throughout the history of war, though weapons have changed, man has remained the same in his thoughts, feelings and emotions. There are two reasons for this fallacy. The first is that the transitions in weapons and tactics have usually been fast, sometimes revolutionary, overshadowing the imperceptible changes in the nature of man; the second is that in spite of these changes, man has always remained the chief instrument of war.

Evolution is a law of nature applicable to all living species, not excluding man. It is conditioned by environment. We recognise this fact in the different races that vary in their basic characteristics. It, therefore, logically follows that for efficiency, military institutions will emphasise different factors in the relationship between the officer and the man according to the ethos of the people. Before I go further, let me establish this point by quoting the views of two eminent commanders of World War II.

Field Marshal BL Montgomery, in his ‘Memoirs’, says, “It is essential to understand that all men are different. The miners from Durham and Newcastle, the men from the Midlands, the Cockneys, the farmers from the West country, the Scot, the Welshman—all are different. Some men are good at night; others prefer to fight in daylight. Some are best at the fluid and mobile battle; others are more temperamentally adapted to the

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\*Note: None of the entries have been awarded the Gold Medal. In view of the importance of the subject, we are publishing two of the essays in the hope that these will promote further discussion and debate.

solid killing in close country. Therefore, all divisions are different. In the 1914-18 War, if ten divisions were needed for an offensive, the staff would take the ten most easily assembled. But a division develops an individuality of its own, which the highest commander must study and thus learn the type of battle each is best at. Once I had grasped this essential fact of difference, I used to match the troops to the job: having studied the conditions of my particular task that was impending, I would employ in it divisions whose men were best suited to those conditions and preferred them."

Field Marshal William Slim, in his book 'Courage', says, "Moral courage is a higher and rarer virtue than physical courage. To be really great, a man or a nation must possess both kinds of courage. In this, the Japanese provide an interesting study. No other army has ever possessed massed physical courage as the Japanese did; its whole strength lay in the emotional bravery of the individual soldier. The Japanese generals shared their men's physical bravery to the full, but they lacked, almost to a man, moral courage. They had not the moral courage to admit when their plans had failed and ought to have been changed; to tell their superiors that their orders could not be carried out and to retreat while there was still time. We played on this weakness and by it often the Japanese commanders lost their battles and destroyed their armies."

Not only does modern man differ in racial characteristics, but he is also a vastly changed person from primitive man. The basic factor responsible for this is the development of his intellect. As his intelligence increased, he demanded more self-expression. His social institutions began to change, and with this his relations with his superiors. But since we are primarily concerned here with military organisations, let us first determine the basic factors on which they depend for their effectiveness.

#### THE BASIS

Military organisations are designed to win battles. Throughout history, these organisations have existed in diverse forms with varying degrees of effectiveness. If we are to determine the most suitable organisation for the Indian Army today, we must understand the basic factors that make a military institution viable. These are three: discipline, morale and fighting efficiency.

Military discipline is a state of individual and group training that creates a mental attitude resulting in correct conduct and automatic obedience to military law under all conditions. It should be founded upon respect for, and loyalty to, properly constituted authority. In 1732, Marshal



Maurice de Saxe wrote, "After the organisation of troops, military discipline is the first matter that presents itself. It is the soul of armies. If it is not established with wisdom and maintained with unshakeable resolution, you will have no soldiers. Regiments and armies will only be contemptible, armed mobs, more dangerous to their own country than to the enemy." Ardant Du Picq said, "Discipline must be a state of mind, a social institution based on the salient virtues and defects of the nation." It, therefore, follows that the type of discipline enforced must be suited to the character of the people to whom it is applied.

Morale is the state of mind of the individual which reflects his attitude towards everything that affects him—his fellow soldiers, his leaders, army life in general, and other matters that seem important to him. Morale is closely related to the satisfaction of a man's basic human needs. High morale is an affirmative positive state of mind which gives the soldier a feeling of confidence and well being that enables him to face hardship with courage, endurance and determination. Morale and discipline are the opposite sides of the same coin. The term 'esprit de corps' is often used erroneously as synonymous with morale. 'Esprit de corps' is the esteem which the members of a group have for their organisation. It is expressed by the individual identifying himself with the group and showing loyalty to it, whereas morale refers to his total emotional tone.

Fighting efficiency is the capacity to produce desired results. Both morale and discipline by themselves are not enough. To win in battle, proper techniques are required for which training is essential. With good morale and discipline, a high standard of training is easily achieved and when a military organisation has the confidence of defeating the enemy, because of its superior fighting proficiency, discipline and morale are enhanced. Therefore, all the three factors are interacting.

There can never be an absolute answer as to what should be the correct measure of each of the three essential factors in the military organisation. This is determined by the characteristics of the men who compose it, the state of the evolution of warfare and the environment in which the organisation has to function. But for deciding our present requirements of the relationship between the officer and the man with regard to discipline and motivation, a study of this aspect of military history is essential. Ardant Du Picq, in 'Battle Studies', says, "The best masters are those who know man best, the man of today and the man of history. This knowledge naturally comes from a study of formations

and achievements in ancient war." A sound logical structure for dealing with this subject is, therefore, as follows:—

- (a) A study of the evolution of military organisations.
- (b) A brief reference to the evolution of non-military organisations to note the effect of democratic concepts of authoritarian institutions.
- (c) A brief study of modern army organisations.
- (d) A determination of the required relationship between the officer and the man in the organisation of the Indian Armed Forces.

#### EVOLUTION OF MILITARY ORGANISATIONS

The survey that follows is all-embracing, but has of necessity to be brief. It is a study in width, but not in depth; nevertheless it is adequate for the purposes of this discussion.

In the study of this survey, the reader should be constantly appreciating the inter-relationship between the three basic factors of the military organisation—discipline, morale and fighting efficiency—in each of the military systems discussed. Only then will the correct lessons emerge.

From this study, two trends will be apparent. The first is that as the intelligence of man increased, debasing punishments for enforcing discipline were gradually discarded and the soldier began to be motivated by an appeal to his self-respect. Until the Renaissance, which started in 1453 with the fall of Constantinople to the Ottoman powers, when the monks fled and scattered throughout Europe taking their books with them, the soldier was illiterate. With the discovery of printing during the same period, learning began to be more widely disseminated. With the uneducated soldier, discipline was enforced with brutality inspiring fear. With the influence of religion and education, a higher motivation was needed.

The second trend was the result of tactical changes in the methods of fighting. Until 1840, when the breach-loading grooved rifle was invented, armies fought in the upright position, in close formation, under the direct observation and control of the senior commanders. The first military formation was the phalanx, a compact group of spearmen who formed a rectangle of soldiers fighting shoulder to shoulder massed several hundred

feet long and up to 24 men deep. With the development of fire-power, this formation gradually became less dense, until at Waterloo (1815), the British fought in the famous hollow square.

As long as the soldier fought in close formation, he was not required to use his initiative or unduly exercise his intelligence. He was merely required to be brave in battle. But as the effectiveness of fire-power forced the loose form of deployment on armies, first the junior commanders were required to exercise their initiative and use their imagination, and later the individual soldier. This called for a new form of discipline to motivate the soldier to capture his objective, and to hold the military organisation together.

With his intellect undeveloped, primitive man was highly superstitious. Whatever his mind could not explain, and at this stage it could explain very little, he attributed to supernatural powers. In this society, priests and witch doctors, who were the intermediaries between the gods and men, occupied a pre-eminent place. The Indo-European societies of the pre-historical period had a three-fold hierarchy. At the top were the sacerdotal and ruling class, next the warriors, and finally the productive class consisting of farmers and artisans. We see the same in the early civilizations of Mexico and Yucatan dominated by the Zapotecs and Toltecs. They were theocratic societies for 1,000 years in which priests controlled every aspect of life, till they were supplanted by warriors.

By the 9th Century BC, administrative and military control was exercised by the same person. This is the period of the dawn of history when the great empires of the Pharoahs and Assyrians flourished. At this stage, military power became paramount and conditioned the structure of the whole society which evolved in two forms. In the first, the chief was essentially a war lord who did not hold power alone. He shared it with other warriors who in turn were the sovereign leaders of their clans. This was the pattern of the Greek armies described by Homer in the Illiad. In the second form of society, the military chief was the sovereign ruler who had a permanent army as his personal guard. The Pharoahs of Egypt were autocratic rulers of this type to whose 'divine will' all were subjected. These two modes of society reoccurred later in the feudal systems and absolute monarchies.

Discipline was enforced by fear and the soldier treated with the utmost severity even for minor infraction, to ensure that he did not falter

in battle. Among the the Hittites, who lost the Battle of Kadesh (1295 BC) to the Pharoah Ramesis II, a soldier found guilty of insubordination or stealing was stoned to death or impaled on a stake. The Assyrians, who dominated the ancient world from 3000 to 726 BC, cowed their soldiers into observing the required standard of discipline by barbarous punishments which included physical chastisement, the bastinado, branding, relegation into slavery and the ever present death penalty.

We see in these early systems an entire reliance on discipline secured by fear without any thought of raising the morale.

### SPARTANS AND ATHENIANS

From 1200 to 800 BC, when the Greek states arose on the Peloponnesus, there were two important military systems, those of Sparta and Athens. Sparta was a military state in which the whole society was organised like an army. Every male Spartan was trained for war, and throughout his life was ready for battle. The male baby, if found physically unsuitable, was promptly thrown into a chasm at Tagetus. Spartan youth were as accustomed to cold, hunger, long marches, group movements and the use of arms, as veteran campaigners. Throughout his life, every man was a member of a fraternity of 15 men who fought together and met every evening for the meal in the common mess. The aim of every Spartan male was to seek glory in battle.

We see a parallel to the Spartan system in the Aztec empire of Mexico. The god of Mexico, Huitzilipochtli, was the god of war and every citizen, irrespective of social origin, was a warrior. Aztec soldiers readily accepted an iron discipline. From childhood, they were accustomed to severe physical exercises, handling arms, making long marches, and carrying heavy burdens since they were acquainted with neither the wheel nor the horse.

The Athenian military system was less rigid than that of Sparta and discipline was based on the individual's sense of honour and civic devotion. The supreme commander was allowed to rid the army of cowards and to fine and put in irons soldiers who had proved themselves inept in combat. Those who were conspicuously brave were rewarded with a special crown worn only on State occasions, or with a specially made honorary armour. Once the fighting was over, the Athenian returned to civilian life and played his part in the growth of the city.



In spite of their high specialty for war, the Spartans succumbed to the Athenians. This was because they could not adapt themselves to change and progress. For this, Aristotle gives one of the best explanations. He says, "The essential goal of any social system must be to organise the military institution, in functions of peacetime conditions when the soldier is not on active duty; and this proposition is confirmed by experience. For military states have no chance to survive except by waging war, while they assure their ruin as soon as they have finished making their conquests. Peace weakens their character, and the fault resides in a system which does not teach these soldiers what they must do with their lives when they are not on duty." The Spartan warrior was separated from all creative activities, and his mind became as rigid in its thinking as his body in its breast plate and he could not evolve, in contrast to the Athenian by whom he was defeated.

The same lesson was repeated in the defeat of Nazism and Fascism by the democracies in World War II.

The Romans regarded military service as a cherished right as well as a stern duty of citizenship, both freedom and slaves being debarred from the ranks. Despite the hardship, it was considered such a harsh penalty to be refused service that disloyal factions were punished in this manner. Allied peoples of Italy were accepted for service but were formed into separate organisations, an allied legion serving with a Roman on nearly equal terms.

### ROMAN ARMY

Discipline in the Roman army was always fierce and much stricter than in the early Greek armies. Flogging was administered for trivial offences, the death penalty for cowardice or disobedience. Merely being absent beyond hearing of the trumpet call could be defined as treason and punished by crucifixion. However, the execution of sentence depended upon the clemency of the local commander who sometimes found this kind of ultimate discipline difficult to enforce. If the tribune assented to the man's execution, he signified it officially by touching the poor soldier's shoulder, whereupon the rest of the troops had to stone and trample him to death. If a Roman fighting unit retreated too quickly in action, it was decimated by the order of the commanders themselves. Lots were promptly drawn and one man in ten was picked for summary execution.

No other nation in history has ever imposed such rules on citizen soldiers, and Ardant Du Picq, in his "Battle Studies", has offered the expla-

nation that in order to conquer enemies that terrified his men, a Roman general heightened their morale, not by enthusiasm but by anger. He made the life of his soldiers miserable by excessive work and privations. He stretched the force of discipline to the point where, at a critical instant, it must break or expend itself on the enemy.

There was incredible fanaticism in enforcing discipline. Titus Livius tells of a famous occasion during the Gaulish invasion of Italy in 381 BC when Titus Manlius Torquatus, the Roman commander, condemned his own son to death for having, despite orders to refrain from single combat, fought a taunting Gallic chief in a hand-to-hand fight, although he conquered him. We see a parallel in the Inca empire in Peru. The Inca soldier was characterised by his total devotion to the state and his complete acceptance of the strictest discipline. Disobeying of an order, even if the consequences were favourable, was punished by death irrespective of rank. A general named Capac Yupanqui who conquered a province on the borders of the empire without having received orders to do so, was promptly executed.

In the evolution of discipline, we see a total reversal of this attitude as the fighting man became more enlightened. At the Battle of Cape St Vincent 1797, in violation of the hitherto sacrosanct Fighting Instructions, in the presence of the enemy, Nelson left the line without orders in order to hold the gap in the enemy fleet and was responsible for a great victory. As an act of tactical skill and initiative, it was great; as an act of moral courage—even in 1797—it was sublime. After the battle was over, he went on board 'the Victory' to report to Jervis, a formidable disciplinarian, in a state of considerable trepidation, not sure whether he would be praised or broken. But all was well.

In the Roman army, terror was not the only means of motivation. There were rewards for bravery and endurance. Increase in salary, a share of the booty, and the hastapura—award of the lance of honour—were typical incentives. For the victorious army and its general, collective recognition was accorded by the official ceremony of triumph which took place when the hero returned to Rome.

The strength of the Roman army lay in its discipline, training and esprit de corps engendered by strong patriotism. As opposed to them, the Carthaginian army consisted mainly of mercenaries held together by the personalities of strong leaders like Hamilcar and Hannibal. With the

Carthaginians, punishment for failure in command was severe. Hanno, the commander of the garrison at Messina, was promptly executed for having abandoned territory to the Romans. In 253 BC, his son, Hasdrubal, was executed in the same fashion for not having captured Palermo.

### FEUDAL EUROPE

In Europe, centralised power weakened after the death of Charlemagne in 814 AD, and up to the Renaissance in the 15th Century, feudalism prevailed. The king or duke was the lord of his own domain and at the same time over a larger domain belonging to several lords who were his vassals. Each vassal had a personal army from which he was obliged to furnish armed troops in war for the lord to whom he was vassal. Christianity by now had a leavening influence. The soldier was a naive, rough and brutal individual in many ways, but he was also profoundly religious. There were horrible cruelties committed, but also extraordinary acts of fidelity, bravery and charity. The soldier fought by a system of ethics that was basically Christian. It forbade him, for instance, to kill a conquered enemy or put a doomed man to the sword. The knight observed a code of chivalry which required him to be brave in battle, loyal to his superiors, kind to his subordinates and fair to his enemies.

It is interesting that a similar feudal system evolved in Japan from the end of the 14th Century to the early 17th Century, which was the golden age of Japanese knighthood and chivalry. A code of honour, called bushido, appeared, based on the old feudal code of conduct, the Yamato. The bushido prescribed three duties to the samurai: serve only one master, be ready to sacrifice one's life for that master, and keep one's promise. The faithfulness of the Japanese samurais to this code of honour is one of the most remarkable aspects of military life in medieval Japan.

The military organisation of the Mongols evolved in a different pattern because of the unique environment. The icy winters and torrid summers with constant violent winds stunted their cultural growth and they had little personality. Due to the struggle for survival in a difficult climate, they were extremely hardy with a taste for adventure. They were excellent horsemen and archers both on foot and on horseback. They were pitiless, apathetic and violent. Genghis Khan united them in 1206. His power was based on the loyalty of his great vassals to whom he gave lordship over a number of estates. The fidelity of the Mongols to their

leaders was legendary and they mercilessly sought revenge whenever the occasion required it.

Genghis Khan taught them to appreciate the effectiveness of military discipline, the value of methodical combat, and the necessity of serving in peace time as in war in coordinated hierarchies and units. He instituted a rigid disciplinary code called the 'Yassak' which succinctly stated "He who does not obey the "Yassak, loses his head."

A military organisation similar in some respects to the Spartan developed in the later Middle Ages in the elite fighting corps of the Turkish Ottoman Empire, called the Janissaries who were founded in about the year 1340 and lasted 300 years. So extraordinary was their reputation that the Sultan had himself enlisted as one of their officers and donned their uniform to collect his pay on pay day. To man this corps, the best physical specimens of boys and youngmen were taken away from their families whom they never saw again, and enrolled. They were converted to Islam and subjected to an iron discipline.

The moral strength of the Janissaries came from their esprit de corps, their love of war and booty, pride in martial exploits, and a religious fanaticism aroused by the Imams. Desertion, cowardice, abandoning one's post and refusing to obey orders were punished by death. With their defeat in the siege of Vienna 1683, they disintegrated. Like the Spartans, they did not keep pace with the new developments of war. They also took to business and acquiring wealth and lost their martial qualities.

By the 17th Century, religion and education began to have a humanising influence on military institutions, and morale and esprit de corps assumed greater importance in motivating the soldier. Gustavus Adolphus (1594-1623), King of Sweden, introduced innovations to ensure the morale, loyalty, sense of honour and morality of his troops. He personally warmly welcomed his soldiers, suppressed the use of the whip and other degrading punishments, forbade drunkenness, gambling and blasphemy and did not tolerate any women in camp except the legitimate wives of the soldiers.

Cromwell, who started his military career in 1642, organised an army in many ways similar to that of Gustavus Adolphus. He enlisted true Christians rather than the usual drunks. He maintained an iron discipline. The death sentence was ordered for soldiers absent without leave, for drunkenness, talking back to officers, fleeing before the enemy, and blasphemy. Officers who capitulated without having resisted to the last



moment, or who tolerated theft or pillage, were also executed. The weak and incompetent were broken without mercy. However, he had a true affection for his men and cared for their welfare. He also set them an example with his own austerity and simplicity of dress and manner.

### TREND REVERSED

With Frederick the Great of Prussia (1740-1786), the trend of the respect for the individual was reversed. The fear which he induced by discipline crushed out the last spark of individuality. Soldiers were enlisted practically for life and were held under a surveillance which amounted to captivity. The military rule was reminiscent of Roman sternness. But the difference was that the Romans who were citizen soldiers were so proud of their arms that they deemed it a disgrace to be barred from service. The Prussian soldier, in contrast, was held in contempt by his superiors who regarded him hardly more than a beast of burden. Prussian training aimed at producing an automaton which could not make a mistake. The pay and the food in the army were poor and the soldiers were forced to do degrading work to supplement their earnings. Like the Janissaries earlier, they were thus corrupted and this contributed to their defeat at Jena in 1806.

In America, George Washington, who was the Commander-in-Chief of the American forces during the War of American Independence (1775-1781), had the problem of creating an army out of dubious material. His army was trained at Valley Forge by Baron Von Steuben, a lovable imposter who had served under Frederick the Great. In his history of the United States Army, William Addleman Ganoe states that "his drill regulations showed his good sense and humanity. On them are based all the subsequent ones in our service." Where other armies, including the British, copied Prussian methods in a spirit of blind emulation, Steuben adapted them to American conditions. He abolished the old rule of fear and replaced it with a new bond of sympathy and mutual respect between the officer and the citizen soldier.

The French Revolution, 1793, changed the complexion of warfare. A decree was passed introducing universal conscription and, with a few strokes of the pen, the entire military past became outdated and the modern nation in arms was born.

The troops under Napoleon were motivated by very high morale which became the key factor in the battle-worthiness of the troops. A new

type of soldier appeared on the scene, stronger, more alive and dynamic, devoted to his leader and linked to his cause. Throughout his whole career Napoleon was close to his soldiers and few commanders surpassed him in leading and animating them. He showed that love for a leader and a cause could produce results far surpassing those of a brutal discipline. In contrast, the Duke of Wellington was cold and aloof and referred to his men as 'scum'. But it was his good fortune and that of England that his famous Light Infantry was trained by a humane and far-sighted commander, Sir John Moore (1761-1809).

In 1802 Moore formed a training camp at Shorncliffe which not only created the Light Division of the Peninsular War, but also introduced a new form of discipline form that which existed. Opposing the lash as the main resource of discipline, he insisted on the moral as well as the physical development of the rank and file. He was the greatest trainer the British Army ever had and for a generation it remained a distinction to have been an officer promoted by Moore. The influence of Shorncliffe can be traced down to the final victory at Waterloo.

Moore foresaw that when the close formations of Frederick the Great and the earlier days were given up, "when each man had to work separately but in combination, the essential thing required was not a new drill, but a new discipline, a new spirit which should make of the whole a living organism to replace a mechanical instrument." His principles on discipline were: "First, that it is necessary to have the officers efficient before the men, and to require of the officers real knowledge, good temper, and kind treatment of the men. Second, that power should be delegated to officers commanding companies, the men to be taught to look up to them in matters alike of drill, food, clothing, rewards and most punishments. Third, that all officers and non-commissioned officers were to understand that it was their business to prevent rather than to punish crime."

Moore's innovation was to encourage and not to repress intelligence to make the development of the individual contribute to the effective unity of the whole and to enlist the zeal of the private as well as of the officer to perfect the whole.

England was also fortunate that her greatest sailor Horatio Nelson (1758-1805) lived at the same time as Moore and held the same ideas. He had the knack of winning the love and affection and sometimes almost the

worship of his men. He trusted his subordinates implicitly and confided in them his secret intentions so that when an emergency arose they would have the best chance of acting as he would act. His subordinates responded to this trust. In every other fleet during battle we find streams of messages going out from the flagship to the other ships. At the Battle of the Nile 1798, immediately after opening fire, Nelson sent the signal, "Engage the enemy more closely." Nothing more was said until the next morning when the affair was over. It was the same at Trafalgar in 1805. Such was the degree of trust and understanding reached that once action was joined no signals were necessary.

### MODERN TIMES

In the 19th century close order formations ceased to exist. It was no longer a matter of commanding the movements of well lined up geometrical blocks of battalions, regiments or brigades, but rather of inciting a long wave of men who were out of the personal control of the senior officers. The role of these officers was limited to assigning the objectives and deploying the reserve. Command was decentralised and each element had to conduct its own combat using its allotted means and on its own responsibility.

By the 20th century the methods of warfare became so complex that a commander became more of an organiser of various specialities in the arms and services. His tools were intelligent men highly skilled and knowing more about their own functions than the commander. The problem of motivating them in battle had now assumed different proportions.

By the 20th century, man had attained a high degree of intelligence and the influence of democratic concepts had pervaded all levels of the free societies. In the closed societies the outburst was contained by the repressive measures of the police state. But even in these societies the welfare of the masses rather than of the individual became the goal. In order to illustrate these trends I shall briefly refer to a few non-military organisations.

In governments, the democratic forms of government became more widely representative and replaced the oligarchies. In the goals of government, social welfare assumed increasing importance. Social attitudes are changing

and a greater degree of permissiveness is accepted. Old ideas on homosexuality, capital punishment, abortion, free love, etc., have ceased to have social sanction. Authority in all form is the first target and is constantly challenged. In educational institutions, persuasion has replaced the dictates of authority. Corporal punishment has been abolished and new ideas of respect for the personality of the individual have gained ground.

Industry first started with the dictatorial authority of a few capitalists who exploited labour to amass huge profits. As the solidarity of the employees increased, the employers fought their influence by every weapon they could muster such as blacklisting, lockout, the 'yellow dog' contract, the labour spy, use of strike breakers and armed guards, and forming 'company unions'. All this was of no avail. Today labour is in a commanding position to assert its own rights.

In this milieu the Armed Forces have the problem of maintaining their fighting efficiency.

#### MILITARY SET-UP

To establish the proposition made earlier that a military organisation should reflect the ethos of the people and that it evolves from its own particular history, I shall briefly refer to three modern military organisations which are distinctive. Although the People's Liberation Army of China is one of the most important military organisations today, it has not been dealt with because too little is known about it.

In the programme of the Communist Party of the Soviet Union adopted at the 22nd Congress, it was stated that : "The foundation of the military organisation is the leadership of the Communist Party over the Armed Forces and the strengthening of the role and influence of party organisations. Party organisations should penetrate into all aspects of the life and activities of the armed forces". There are two major supports for the Communist regime, the first is the army and the second is the system of police investigation and control. The most significant problem therefore is the political reliability of the soldier. This forces the party and the government to establish and maintain within the armed forces a system of political control on a scale unknown and impossible within the armies of the West.

Repression remains the major means of coercion and fear, for maintaining and strengthening military discipline. Every serviceman, from the



lowest to the highest rank is completely surrounded by a tight circle of control both covertly and open, by the most varied means of persuasion and coercion including physical violence. This system while it ensures mass obedience, stifles initiative and originality, and in the case of a serious crisis can lead to a catastrophe. As a result of it, in practice Soviet military discipline is an incohesive mixture of universally accepted principles of discipline and concepts which are uniquely socialistic.

The military commander's authority is effectively circumscribed by party considerations to eliminate his personal influence and control over his units. Although he is nominally responsible for the state of discipline in his unit, in fact he shares this responsibility with the unit itself, the military collective. It is the collective which influences the individual, demands that he conforms to the requirements, and continually controls his actions.

The commander who is usually a party member is subordinate to the party organisation of the unit in which he serves. He is expected to bring disciplinary problems before the party and seek its advice. In attaining political control over the Soviet armed forces, both the prestige and influence of the Soviet unit commander as well as effective military discipline had to pay the price. The combat effectiveness of the unit is adversely affected by the meddling interference of the party apparatus in the processes of discipline. However the sources of strength of the Soviet armed forces is its intense patriotism and the fact that it cannot be corrupted by greed for money.

A unique feature of the Soviet disciplinary process is the formation of assault battalions in wartime which are employed on suicide missions. Wartime courts may sentence servicemen to assault battalions regardless of rank. All court sentences including capital punishment, may be commuted to assignment to assault battalions. According to the law, criminals sentenced to serve in a penal battalion 'must erase their guilt before the Fatherland with their blood.'

Israel is a new nation, young and virile, surrounded and greatly outnumbered by hostile neighbours. Since it occupies a small land area the loss of a battle could mean the loss of the war and with it of the national identity. With these disadvantages the nation has to maintain military professionalism to the highest degree. The goal is to attain superiority in

training and quality of material to overcome quantitative inferiorities in these two aspects.

With a small population the national military system is founded on universal conscription. Both the sexes are conscripted at the age of 18. Service in the armed forces is considered to be part of the normal routine of life and failure to be accepted for conscription carries a social stigma. There is a firm belief that every citizen owes a military obligation to the nation and that the armed forces must help to develop the nation, as well as to defend it. This complete identity with the people is the greatest strength of the Israeli Armed Forces.

Since the army is a citizen army, there is little scope for pomp and show. Training and the enforcement of discipline is strictly utilitarian purely designed to achieve efficiency in battle. Since the officers and men would be rubbing shoulders together in civilian life it would be impracticable to impose artificial barriers between them in the army. Uniforms are simple and same for all except for the insignia and the food served in the officer and enlisted messes is the same. Discipline is strict but the personal relationship between officers and enlisted men is informal and what must be unique for any army in the world, officers are often addressed by enlisted men by their first names or nicknames.

The strength of the Israeli armed forces lies in its remarkable esprit de corps engendering high morale, a fighting effectiveness which is the result of professionalism with a drastic elimination of non-essentials, and a discipline which is the result of high patriotic motivation.

In the matter of enforcing discipline and motivation in the Armed Forces the United States affords a striking contrast to the Soviet system—a reflection of the difference in the governmental systems. The United States is an open society with freedom of speech guaranteed by the Constitution, and jealously guarded. In maintaining discipline the army is subjected to severe political pressures. A number of problems have arisen in the country which make the task of having an efficient fighting organisation an extremely difficult one. The nation has enjoyed a galloping affluence with a very high standard of living which has induced a greater love for ease and comfort and distaste for hardship. The inconveniences of soldiering are sought to be overcome by mechanical and material profusion. This has resulted in a very high 'tail to teeth ratio' in the army.

With affluence the nation has tended to become materialistic, losing its spiritual values. It has been dominant in the world in its mercantile proficiency and has developed business management to a high degree. Unfortunately the business managerial techniques have been insinuated into the army at the cost of spiritual leadership. Professional efficiency has been equated with material excellence and superiority, and the moral factor, the most essential one in a military organisation, is deficient. This has resulted in an army with a vast ability to fight but little will to fight. The army has been mostly employed in foreign theatres and the most important motivation of having to fight for one's country is missing.

The nation is currently undergoing a serious social revolution with its new generation militating against all forms of authority. This has seriously undermined the discipline of the army. For political considerations, these defiances of authority have been handled by the government in a very low key. For example, the Army Secretary, Stanley R Resor, referring to these problems said, "The real challenge to the Army.....is to handle it in a way that accommodates the two separate policies of freedom of speech and the necessity for carrying out national defence directives."

In his article 'This far no farther' (Military Review March 1970) Brigadier General T.C. Mazaxis highlights the position in the following words, "It is time that our past methods of dealing with subversion from within be carefully analysed. The need for such an analysis was posed in General Westmoreland's speech where he questioned, 'Is the most significant threat to the US foreign or domestic, or is it a combination of the two?' To most in the armed services, the answer is obvious—the foreign threat can be handled. The domestic threat, consisting of attacks on the discipline and morale of troops, must be recognised and new techniques developed to deal with it."

#### THE MILITARY ORGANISATION OF THE ARMED FORCES CAUSES OF DECAY

Let us first consider why military organisations wither and die. From the panoramic view of their evolution, the causes of decay are self-evident. The first cause is the result of prosperity when a nation loses its hardihood and becomes effete. It then shrinks from going to war and buys its peace at any price. This was the cause of the decline and fall of the Roman empire. At that stage the Roman no longer took pride in bearing arms; he employed mercenaries to fight for him. Although we cannot consider ourselves as prosperous, we are in danger of becoming flabby in our thinking by

not promoting and depending upon our own strength. In the past instead of making the Armed Forces strong, we have depended more on non-aligned tight-rope walking. We are constantly propagating our peaceful intentions and our background of non-violence. Without doubt war is horrible, but ironically it can only be honourably prevented when one is prepared to go to war when the issue demands it. Israel is a good example. When a nation insists on parading its civilised horror for war, it loses its virility and changes its sex. It becomes a feminine nation subject to the rape of conquerors. To be prepared for war, discipline and training must be maintained at the highest level. A military organisation and a warlike organisation are not necessarily the same. In the years preceding 1962, the Indian Army was warlike, but far from being military.

The second cause of decay exists when the soldiery is infected with the lust of making money and promoting other forms of personal gain. This loosens esprit de corps and the bonds of discipline, and the military organisation loses its cohesion as happened with the Janissaries and more recently with Chiang Kai-shek's army.

For their very survival, the Armed Forces need to maintain a high moral tone. This is not a problem of morality, but sheer necessity. If the supreme sacrifice is asked of any man, it will never be made under conditions where selfishness exists. With the increasing industrialisation and affluence in the country, corruption is becoming widespread. Already one sees two standards of conduct in the upper strata of society, what is preached and what is practised. The canker is entering the Armed Forces. We should be vigilant to exact and enforce discipline among the senior officers in the same manner required of the juniors. This is all the more necessary because our officer class is drawn from educational institutions which are at present in a turmoil of unprincipled indiscipline. They have to be motivated by good example.

The third and most important cause of decay, one to which democracies are highly susceptible, and we belong to that class, is political interference affecting the professionalism of the army, by inducting favourites and factions and undermining discipline. This is bad enough in other democracies where political leaders have personal experience in the Services. The problem is aggravated in this country because, in their outlook, the services are a class apart from the rest of the nation except for that stratum of society where there are ex-servicemen. Ours is the only important country in the world where the political leadership has had no taste of military service. This accounts for the incongruous speeches in times of emergency by political leaders. It is understandable that politicians tend to use the

various organisations that exist to further their own ends. But when this rot sees in the Services, discipline, motivation and morale quickly disintegrate and a strong organisational fabric consolidated over decades is criminally demolished in a few years.

The manner in which the army was emasculated by furthering the careers of political generals and breaking competent ones, in the years which culminated in our humiliating defeat in 1962, is a striking example. The defeat in 1962 was the purgatory by which the army and the nation regained their souls. Lest it be thought that this is past history, it is pointed out that this weakness is apt to reoccur in a democracy such as ours.

Our greatest asset is the character of the Indian soldier. Few armies in the world can boast of a soldier who has a combination of all the finest martial qualities. He is brave and highly disciplined, home loving and religious with high moral values. He is not prone to the excesses which the aftermath of battle generates. He is capable of enduring considerable hardship cheerfully—limitless if his officer is prepared to do the same.

Our second asset is that our frontiers are on a great variety of inhospitable terrain. Soldiering in these areas bring out the best martial qualities and helps to keep the army in good trim. In fact it is essentially the esprit de corps that develops from soldiering in hard areas that counteracts the venal influence of a corrupting society.

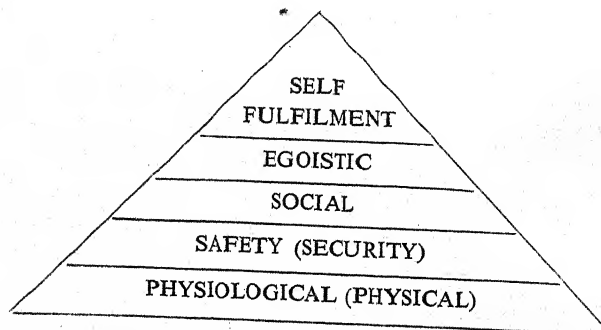
Our third asset is the liberal availability of training areas and training time which if profitably used can ensure a high standard of professional efficiency.

### THE MODERN SOLDIER

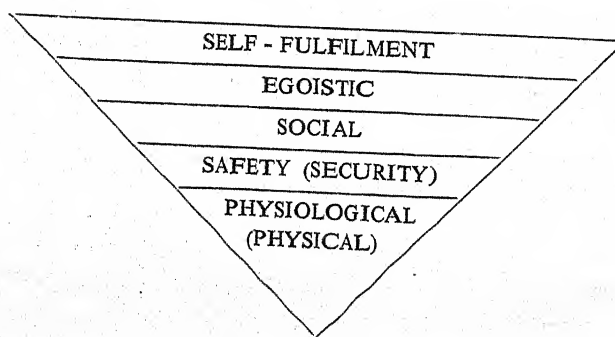
We have seen that the factors that brought about the creation of authoritarianism no longer exist. Generally speaking, the more educated a person becomes, the more he tends to think and act independently. With the qualitative increase in education, the soldiery has been transferred from an unthinking group into an inquiring and information-seeking body, and with this change it tends to resent authoritarianism as a form of command. This condition has been accentuated by the technological advances due to which the technical soldier would know more about the details of his job than his commander.



Man is motivated to satisfy his needs. In the past the relative importance of these needs were in the hierarchy as shown in Fig 1.



Under this concept, the physiological needs are the basic ones and the self-fulfilment needs, which are the highest, are not necessarily important until the basic ones are satisfied. A satisfied need is not a cause for motivation. In India, as we advance towards our goal of achieving the socialistic pattern of society, the relative importance of these basic needs as instruments of motivation are changing. Food, clothing, medical care and other basic needs would be more readily available and satisfying these needs would be of relatively less importance than the higher needs. Man would have more energy to devote to the egoistic and self-fulfilment needs and their importance in the hierarchy would change as shown in Fig 2.



With these changes in motivation, the behavioural pattern of the soldier has changed. Recent studies show that we are now basing our concepts of command on false assumptions. Douglas M McGregor in his book 'The Human Side of Enterprise' gives the two different approaches. Theory X contains current false assumptions usually held about human

behaviour. Theory Y contains views based on scientific findings. These are as under :

### Theory X

The average human has an inherent dislike of work and will avoid it if he can.

Because of this human characteristic of dislike for work, most people must be coerced, controlled directed and threatened with punishment to get them to put forth adequate effort towards the achievement of organisational objectives.

The average human being prefers to be directed, wishes to avoid responsibility, has little ambition, wants security above all.

### Theory Y

The expenditure of physical and mental effort in work is as natural as play or rest.

External control and the threat of punishment are not the only means for bringing about effort towards organisational objectives. Man will exercise self-direction and self-control in the service of objectives to which he is committed.

Commitment to objectives is a function of the rewards associated with their achievement.

The average human being learns, under proper conditions, not only to accept but to seek responsibility.

The capacity to exercise a relatively high degree of imagination, ingenuity and creativity in the solution of organisational problems is widely, not narrowly, distributed in the population. Under the conditions of modern industrial life, the intellectual potentialities of the average human being are only partially used.

## DISCIPLINE AND MOTIVATION

We have already inherited and function on the type of discipline promoted by Sir John Moore and Horatio Nelson. In a democracy the Prussian type of discipline cannot take root. The danger to our organisation does not arise from the possibility of harshness, but the erosion of gradual permissiveness. Already standards are deteriorating. There is

laxity in the standards of integrity we enforce among officers. There is also laxity in enforcing a high sense of duty. Today a court martial of a person for malingering is unheard of. Various political pressures are at work enlarging the areas of permissiveness which erode the discipline of the Armed Forces. This is our danger and the happenings in the United States Army should serve as a warning. We have seen that armies have even been successful with brutal discipline but no army has ever remained effective with no discipline.

However our concept of discipline should be utilitarian like that of the Israel Army, solely designed to promote fighting efficiency. A reappraisal is required to eliminate all forms of 'bull' which adhere like barnacles to our organisation and promote false reports and deceit. With this concept of discipline, at junior level, that is up to the command of a company, command should be by participation. This is being done to some extent today but this needs to be universally enforced. The officer should be able to do all that he requires of his men, particularly bearing hardships, and most things better than them. This should be the basis of the officer's respect; not the fact that he is a class apart.

The main change in the command attitude is that whereas in the past the leader was only concerned with the success of his mission regardless of the feelings of his men, today if he fully subscribes to Theory Y, he will combine a concern for the success of his mission with an equal concern for his men, and this will give him optimum results. In his leadership he will establish mutual respect, mutual confidence and mutual understanding. With this foundation his functions of leadership will take on a new meaning. This means that the views of the team members have to be taken in setting the goals. But this does not imply that the commander has no mind of his own. A good illustration is the number of reports and returns that a formation is expected to maintain. When this number is large, it smacks of constant supervision and nagging. When the subordinates are taken into confidence and identify themselves with the goals set by their commander, because of their own personal involvement they will exercise far greater direction and control on the execution of the task.

In short what is required today is the system of command exercised by Horatio Nelson when all that he needed to do was to send one signal at the start of the battle. "Engage the enemy more closely", saying nothing more after that till the battle was over and victory won. Therein lay the immeasurable greatness of Nelson.

## CONCLUSIONS

I shall now briefly summarise my conclusions.

Man is subject to the law of evolution like all species. He has evolved today with a very high degree of intelligence.

The basic factors of a military organisation are discipline, morale and fighting efficiency, which are inter-related and interacting. For a successful military organisation, the emphasis on these factors will depend upon the national ethos, the state of evolution of warfare and the environment in which it has to function.

A study of the evolution of military organisations shows that as the intelligence of man increased, for best organisational results, brutal discipline had to be replaced by a discipline of respect and involvement of the individual in the enterprise.

With the increase in intelligence, all authoritarian organisations, both military and non-military, began to be replaced by those based on democratic concepts.

Military organisations in totalitarian countries have developed on different lines from those of democratic countries. In them discipline is based on fear and coercion.

Democratic armies, of which India is one, have a greater danger of disintegrating because in an open society permissiveness cannot be easily suppressed. The Armed Forces are also subject to greater political influences and pressures, which over a period tend to erode the organisational fabric. It should be noted that the Indian Army was built up by the British under conditions of authoritarianism.

Democratic Armed Forces have three reasons for decay: firstly becoming physically flabby through prosperity or mentally soft through a lack of a will to fight, secondly through the soldiery being infected with the lust for money or personal gain, and thirdly political interference.

The Indian Armed Forces are in danger of being infected with all the three reasons for decay, but our greatest peril lies in the Armed Forces being emasculated by unscrupulous politicians. This has happened once, the danger of recurrence cannot be overruled. The danger is aggravated because our politicians have had no taste of military service.

We need to recognise that motivation of the soldier for self-fulfilment and egoistic reasons has now replaced motivation for physiological reasons as the main incentive.

Under our conditions, the best form of discipline is that which was practised by Sir John Moore and Admiral Horatio Nelson.

II

## COERCION TO COACTION

GROUP CAPTAIN K D SINGH

### INTRODUCTION

ONE of the most striking features of the 20th century has been the rapid diffusion of the idea of democracy. Totalitarians and constitutionalists may differ as to the proper meaning of the term, but no government would today admit that it is not democratic in some sense or the other or striving to become so. The supreme value of the individual which has been proclaimed in the revolutionary doctrine of liberty, equality and fraternity became a vital concept in the political evolution of States as well as in every sphere of human activity. Few concepts had ever moved so rapidly from obscurity to all but universal acceptance.

The sense of equal entitlement to the means for a decent life has today taken hold of all manner of men within nations and throughout the world community, whether in industrially developed or newly developed countries, in centres of old empires or among the peoples emerging from colonialism, in socialist or free enterprise societies and whether under communist, democratic or even dictatorial rule. Equality of status has become an accepted principle in most of the world as monarchical, aristocratic and other systems of rank and class are being discarded, disabilities of caste, colour, creed and race on certain sections of society removed and measures to implement concepts of equality applied with some effectiveness within different social systems.<sup>1</sup>

This socio-economic change has left no institution untouched and scarcely a relation unmodified including the basic unit of all societies, the family, as well as the various systems of social stratification which gave to the individual his status outside the family

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1. Page 1309 History of Mankind—The Twentieth Century Cultural and Scientific Development Volume Six II WARE, CAROLINE F Panikkar, KM. and ROMEIN, J.M. Unwin Bros., London 1966.



group. Under the impact of industrialisation and urbanisation as well as the growing emphasis on democratic, social and political values, the exercise of strict parental control and authority has been undermined. The democratisation of education has narrowed the traditional gulf between the possessors of knowledge and the ignorant masses and opened the door to large-scale vertical mobility. There has been a tremendous change in the concept of the relationship between management and labour. The growing concept of 'Social Justice' has brought important reforms replacing the old relationship of master and servant. A new pattern of relationship is emerging based not on compulsion but on voluntary efforts of the parties associated in the enterprise to come closer together, to understand each other, to share the responsibilities as also the fruits of joint endeavour and to recognise, accept and work towards common objectives. This new relationship has emerged largely from a recognition of the basic fact that in a free and democratic society, the dignity of the individual and moral values should be given the highest place, and authority should be derived from the effective cooperation and active participation of people in the enterprise.

The "Services" with their hierarchical structure and their legal code constitute authoritarian organisations. The officers exercise direction and control while the men carry out the orders. The men have little or no hand in the formulation of policy and plans. There is, besides, the traditional distinction between officers and men in pay, social status and privileges although the forces of social evolution and revolution have tended to reduce it in recent years. The authoritarian character of the Services and their culture appear to be incongruent with the existing society in which they function and from where they get their human resources.

The object of this essay is to study the implication of this socio-economic change with particular reference to the relationship between officer and man and to the aspects of discipline and motivation in the Services.

### DEMOCRATIC CONCEPTS

Writing in her book on Democracy, Dorothy Pickles states.

"One of the most difficult questions to answer satisfactorily is: What is Democracy? Not only is there no agreed definition but some definitions are so vague as to be virtually useless and others so specific as to be obviously incomplete".<sup>2</sup>

Democracy actually has meant different things to different people. As ideas change so the content of democracy changes in people's minds.

In the 19th century, democratic government was seen mainly in terms of equality of political and legal rights, of the right to vote, to express

2. Page 9—Democracy. Pickles, Dorothy. Basic Books, Inc., Publishers, New York 1970.

differing political opinions and to organise political opinions through political parties, of the right of elected representatives to supervise or control the activities of the government of the day. Today much more stress is laid upon the need for the state to guarantee to everybody certain economic and social rights involving the elimination of educational and social inequalities.

The Preamble to the Constitution of India specifies the rights thus:

"The people solemnly resolve to secure to all citizens; justice, social, economic and political, liberty of thought, expression, belief, faith and worship; equality of status and opportunity; and to promote among them all fraternity assuring the dignity of the individual and the unity of the nation."<sup>3</sup>

Down to World War I, the incidence of governments claiming to be democratic was limited, being confined almost entirely to Europe and to the two Americas and Australia. After World Wars I and II, the number of self-styled democracies whether totalitarian or constitutional, steadily increased. The development was the out-growth of two separate phenomena—the decline of colonialism and the rise of nationalism. Rapid population growth and rising urbanisation did much to upset the traditional basis of colonial society and to foster the dissemination of western influences, including nationalism. The pace of change was immensely accelerated by the coming of mass media—radio and movies which do not require the arduous steps of literacy for imbibing new ideas.

By the middle of the twentieth century, the dramatic advances of scientific knowledge and the resulting changes in material conditions were exerting a vast and ever increasing influence on the economic, social and political life of man, as well as on his cultural, ideological and moral development. With the proliferation of democratic concepts and spread of education, the sense of equal entitlement to the means for a decent life spread to all parts of the world. In the industrial countries, industrialism remade the pattern of life. In the non-industrial areas changes in outlook and social organisation were even more radical since the leaders of Asia and Africa wanted to achieve, in their own life-time what Europe had achieved in 400 years.

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3. Page 19 Democracy. Pickles, Dorothy. Basic Books, Inc., Publishers, New York 1970.

Some of the major socio-economic changes that have taken place and are taking place the world over are summarised below:

- (a) The spread of democratic concepts in the political, social and economic systems and institutions in all parts of the world.
- (b) The decline of autocratic monarchies and colonialism and the rise of national democracies.
- (c) The undermining of parental authority in the family group and the breaking up of the joint family.
- (d) The democratisation of education—opening the door to large-scale vertical mobility.
- (e) The disintegration of the traditional stratification of society on the basis of caste, colour, creed and other restrictions.
- (f) The break-down of the class and status structure with upward mobility and the formation of a very large middle class of professional and technical personnel.
- (g) The changing relations between classes causing uncertainties of new relationships and reflecting hyper-sensitiveness, aggressiveness or other expressions of insecurity among members of the rising group and in self-consciousness, prejudice or other reflection of uncertainty and prejudice among those unable to readjust their conception of their own superior role.
- (h) The proliferation of voluntary organisations based on many kinds of common interest in the political, economic, social and cultural fields. Some of these organisations became an increasingly essential instrument for the operation of liberal democracy and provided a means of group expression.
- (i) The collective drive for individual freedom, human dignity and self-respect through trade unions, employee organisations and other bodies.

### THE SERVICES CULTURE

Culture embraces the sum total of the values held by an organisation which determine its norms of behaviour. It includes the things that are most important and valued, the customs, traditions and beliefs and the codes of conduct laid down for the personnel. All other factors that

affect personnel like modes of work, promotion policies, rewards and punishments are also considered in determining the culture.

In order to understand the authoritarian culture of the Services, it is necessary to briefly survey their evolution from the ancient times to the present day. This will help us to have a better understanding of the implications on the Services of the socio-economic change of the last few decades.

In the ancient and medieval period, the armies were controlled and directed by the aristocracy who were closely linked with the existing larger society. During this period, the military division of labour was simple, the levels of hierarchy were few as well as rigidly defined. The skill requirements were directly available in feudal society without additional specialised training. Officership was not a specialised profession but merely a part-time and occasional aspect of aristocratic existence. The rank and file cadres were also drawn from their peace-time pursuits. Aside from the small mercenary bands, soldiers came from the lower social strata where the appropriate skills for the few auxiliary weapons could be found. While the role of warrior was a most honourable one and military status determined a person's prestige, the relationship in this feudal age between the officer and the man was that of master and servant.

With the simple skill structure and relatively static organisation military authority was derived from tradition, custom and social position. The aristocratic military establishment had an ascriptive system of authority. Authority was ascribed in that persons were born into the officer class or they were excluded.

The aristocratic feudal military establishment was transformed into a professional armed force with the growth of industrialism and the technological development of war. The traditional ascriptive basis of military authority gradually became modified with a greater and greater reliance on achievement. The aristocratic officer began to be displaced as artillery, signals engineering and more elaborate logistical planning required that the military be a trained and full-time occupation. Middle class technicians took over the specialised artillery and engineering services while the infantry and cavalry remained the domain of the aristocracy. The men, however, continued to come from the poorer sections of society and joined the services for pay, honour and loot.

In the early years of the 20th century, the military establishment of most countries had common characteristics. All the countries of continental

Europe and also Japan had conscript armies composed of a permanent officer corps, a nucleus of army regulars and a large reserve of manpower which had experienced military training. Elsewhere in Britain and USA, volunteer armies were the rule. Navies also depended on voluntary recruitment.

In many countries a special group, usually the large landowners provided the core of the officer personnel—a heritage from feudal society in which the functions of land owning and fighting were combined. The professional middle class also provided officers. Military career was looked upon as a high calling.

A sharp gulf continued to separate officers from men. While an open system of promotion existed within the officer group, there was, prior to World War I, virtually little access to this group from below except in the newly settled states of North America and Australia where officers came from all sections of society.

The rigid separation characteristics of military structures reinforced by differences in social origin contributed to the authoritarian nature of military service establishments. In essentially authoritarian societies, military institutions were in keeping with the general social pattern. The old Prussian and Japanese armies for example might be described as exaggerated versions of the pervasively authoritarian and persistently feudal structures of these societies. In Great Britain, the military structure reflected the continuing class divisions but its authoritarianism was not in keeping with the trend towards democratic political forms. The fact that the British armed forces were in the early years of the century mainly stationed overseas was the main reason for its continued authoritarianism. The British Indian Army, which displayed similar if not somewhat accentuated authoritarian attitudes, provided the tradition and values of the present-day Indian army.

During the last few decades, technological developments in war-making revolutionised the organisation and structure of the Services. The technological developments required more and more specialisation and professionalisation. Specialisation penetrated right down the hierarchy into the formations and units assigned for battle. Both the officer and the man required specialisation.

The new skill structure necessitated the recruitment of selected personnel with certain basic educational and other qualifications. A suitable system of recruitment and selection was accordingly introduced by the



Services for meeting the changed requirements. Urban societies began to provide the bulk of this new category of personnel.

To meet the organisational requirements of this proliferation of skills, the military hierarchy was also adjusted. The allocation of ranks no longer remained a pyramid but became somewhat diamond shaped—in fact, two diamonds—one for the officer corps and one for the other ranks. The proliferation of middle ranks covered the specialists in various fields.

The transformation of military authority was affected in other spheres as well. This period saw the narrowing of differences in pay, privileges, status and even uniforms of the officer and the man, the development of conference techniques of command from the smallest unit to the Chiefs of Staff themselves, the rewriting of military law and other measures. Most of these changes were necessitated by the growing complexity of the Services and the requirement of specialisation. Commanders could not tackle every technical problem and had to depend on specialists who developed their own hierarchy. The specialists had to be given pay, privileges and status as obtained in civil life. In fact as specialisation increased, the occupational character of the services changed completely. A large element of technical and maintenance support personnel with equivalents in civil society assisted the comparatively smaller professional element—the fighting man.

#### COMMON FEATURE

Although the Services' culture differs from country to country and also amongst the various Services themselves, one common feature is that of "authoritarianism". The Services in other words have a culture of compliance. Management is by centralised direction and control. There is a hierarchy of command—the line of authority or command goes directly from the top down through the various layers of the organisation with some delegation of authority but full and detailed accountability up the line.

Another important aspect is that the direction and control of the Services is exercised by the officer corps exclusively. Although the officer ranks have been open to men found suitable to hold commissions, the officer corps has not given up its exclusive traditional prerogative of issuing orders and concentrating all authority unto itself. The men and specially the non-commissioned officers have not been given this power in spite of the fact that they are highly skilled and trained.

A wide gulf persists between the officer corps and the men, including the non-commissioned officers. Although the position of master and servant of the feudal age does not exist, the tendency on the part of the officer to look upon the 'man' as a person with limited needs and at a lower rung of society persists. Although a high percentage of the men are educated and quite a good percentage possess high technical skills, they are utilised for fatigues and as batmen or misused in various ways to serve the interests of the officer corps. The traditional relationship of master and servant has been modified but the new relationships extend from paternalism on the one hand to domination on the other.

There is also a wide disparity between the officer corps and the men with regard to their pay, prestige, social status and facilities. This marked difference in privileges and position is another legacy which has been persisting from feudal times.

Discipline in the Services is rigid and at times harsh. All servicemen are governed by a military code which deprives them of certain rights that would be normally enjoyed by them in civilian society. The servicemen are expected to master an elaborate code of social behaviour and professional honour since membership in the military services means participation in an organisational community which regulates behaviour 'on' and 'off' the job.

The culture of the services also includes a vast array of customs, interests, prestige, actions, traditions and thoughts as distinct from those obtained in civil society. These are not only practised but cultivated and perpetuated.

### SOCIO-ECONOMIC CHANGE

The traditional authoritarian culture of the Services was in conformity with that of the feudal society of the Middle ages and even in the later years when Monarchs ruled the world. The proliferation of democratic concepts in the nineteenth and twentieth centuries and specially after World War II changed the attitudes of people towards the exercise of authority—whether in the home, the school, in political life or in the place of work. Freedom, human dignity, equality and self-respect have become of singular importance to the individual. Authoritarian cultures and institutions are not acceptable and are viewed with suspicion. The individual resents coercion and wants individual freedom to realise his own goals and objectives. He desires progress and achievement.

Some of the implications of this socio-economic change on the Services will now be discussed.

Few organisations place as much emphasis on procedures for assimilating new members as do the military or service establishments. Assimilation involves the process of recruitment, selection and training. Orientation which the civilian society gives to recruits—officers and men—assists or retards their assimilation.

The negative image of military establishment in the American social structure stands as a powerful barrier to the recruitment of personnel. In a society in which individualism and personal gain are paramount virtues, the civilian population view the military career as a weak choice. In Britain, there has been a problem for recruitment but the position has substantially improved.

In India, military service is still the most attractive of Government jobs. Unlike most armed services of the world, the Indian Services are middle class today; those who join generally rise in income, status and security. This is specially true of the other ranks. However, it is a moot point whether the services are getting the best men available in the community even with the large-scale unemployment. In the years to come, we may get only second-class material or rejects from other fields which may not be healthy.

The citizen from a free society will also require considerable adjustment on joining the services. When the individual puts on the uniform the basis of his life changes in broad fundamental ways. His legal status is changed: the extent and intensity of his obligations are magnified. He has to put aside his banner of individualism for that of obedience. It will therefore be necessary to give greater emphasis on his qualities of adjustment during the selection process.

Assimilation during initial training requires adopting the recruit to an all-male society and to a social organisation committed to violence. At the most personal level the recruit faces a loss of privacy and exposure to a pervasive set of controls. While these conditions have been acceptable in the past, the recruits coming in the future as they would from a freer, more permissive and sophisticated society, are bound to resent the treatment meted out to them. New approaches for assimilation should aim at fostering self-respect and dignity and creating a sense of belonging.

Training new recruits has, in the past, been governed by a conception of shock treatment for making a sudden and decisive break with civilian

life and rapid exposure to the rigours of military existence. The shock technique was an essential element of the older forms of discipline based on domination. It probably had some functional utility under these conditions but in the new environment it may not be the correct approach, specially for the technical arms. The development of self-esteem and a pride in the profession would be more appropriate today than the emphasis on mechanical and repetitive drill as well as an overwhelming concern with the personal appearance of the individual recruit.

### DISCIPLINE

The importance of discipline in the Services cannot be questioned. It is the generating spark of morale. In fact for the serviceman, discipline is the solid foundation upon which all other soldierly attributes can confidently be created.

Nearly all the legendary armies of history have been strictly trained and regimented. The Prussian system of discipline is famous for its rigidity and harshness. This type of traditional system was based on domination. It is the armies of modern democratic countries, discipline cannot be achieved through the Prussian system of unthinking obedience from mechanical soldiers. Such a system is not compatible with democratic concepts or even the requirements of modern warfare.

The experience of World Wars I and II clearly indicated the difference in the discipline of soldiers from Australia and the USA in contrast to the rigid discipline of the British Army. Field Marshal Allenby is said to have observed that he had never met troops so completely unimpressed by senior rank as the Australians. A widely held view in both World Wars was that British officers, accustomed to instant and unquestioning obedience from other Ranks, were unable to handle Australian troops, who did not care for the outward show of obedience and were liable to react unfavourably to orders which were demonstrably stupid. The notorious refusal of Australian soldiers to salute British officers when off duty was the cause of numerous incidents during World War I.

The Services today are recruited from a society which is breaking traditional bonds. Each individual considers himself to be equal to the other and does not tolerate being pushed around. The greater his intelligence and awareness, the stronger is his resentment. The enlightened mind has always the greatest measure of self-discipline but it also has a higher sense of what constitutes justice, fair-play and a reasonable requirement in the performance of duty.

Even in advanced societies like that of the United States where Service personnel have a lot of freedom and Service discipline is lax compared to many other countries like Britain or India, there is strong resentment at regimentation and efforts have been made by the American Army's Chief of Staff, General Westmoreland, "to make life in the army a bit more like home". The latest changes are being made in the American Navy whose Chief of Staff, Admiral Zumwalt, feels that freedom and responsibility are not incompatible and men treated less like children in the Service of the country will, if called upon, prove the equal of their predecessors as fighting men.<sup>4</sup> As a contrast to this, the US Marines refuse to compromise and its spartan challenge is luring volunteers in a permissive age. But a detailed scrutiny would show that the volunteers are mostly the youth who have not done well in society—hopeless drop-outs and a lot of losers who join them as a last ditch.

Today the "big stick" approach of discipline, discipline from without or negative discipline is not likely to be very successful. Heretofore, the bulk of soldiers came from the rural traditional society where the youth was accustomed to a hard life and adjusted easily to military service and discipline. The modern soldier, sailor or airman has been brought up in a free, more permissive and sophisticated society. He is bound to be influenced by the fast-growing concept of individualism that leads to challenging of authority. Autocratic type of discipline or rule through fear has, therefore, to give way to positive discipline or discipline from within. The supervisory personnel will have to develop a willing adherence to the necessary rules and regulations of the organisation. The service personnel both as individuals and as a group will then adhere to the desired standards of behaviour because they understand, believe in and support them.

Discipline in the future must take the form of positive support and reinforcement for approved actions. Punishments will have to be applied for proper behaviour but it would have to be carried out in a supportive, corrective manner. There should be no vindictiveness. The aim should be to help, not harm the individual. Personal responsibility and self-discipline would then be fostered and developed to meet the requirements of the Services.

### MOTIVATION

Motivation has been defined as the stimulation of any emotion or desire operating upon one's will and prompting it to action. Motivation

4. Page 18 'TIME' Dec. 21, 1970.



comes from inside each individual. Fundamental human needs—such as air, food and shelter; belonging, “ego” satisfactions (including self-esteem, recognition from others, and opportunities for achievement, self-actualization and self-development)—act as powerful though often unconscious motivators of behaviour. It has been established that the whole individual is motivated, not just part of him; that while a need is satisfied it is quiescent; frustration of basic needs makes a man sick, resulting in adoption of defence mechanisms of aggression, withdrawal, fixation and compromise.

During the feudal age, the soldier had only the basic wants of food, shelter and security. He was motivated to serve his master or lord to fulfil these wants. The added attractions of soldiering were of course glory, loot and plunder. In the era of the industrial revolution and mass professional armies, the servicemen were motivated again for fulfilling their basic needs. The officer corps were motivated by honour and glory. The wants, desires and needs of the soldier, sailor and airman today are of a higher order. His physical needs and the needs of security are satisfied by a secure job and reasonably good pay. He has now the desire to achieve, the desire for good performance to be recognised, the desire for status.

Throughout history, cooperative effort has been the key to human progress. Today with his sense of intellectual independence and his consciousness of the significance of his own competence, initiative and freedom, the individual man rebels at being denied full opportunity to participate in decisions on matters ultimately affecting his own destiny, for example, in his job. Social scientists in fact now take the view that poor performance on the job is due more to lack of involvement than to laziness or incompetence. Douglas McGregor, the famous behavioural scientist, believed that passiveness was misdirected energy and a direct result of the work situation—for human nature is not in itself perverse. If people have a hand in setting targets for themselves, they will set good targets and they will see that what is good for the organisation can also be good for them.<sup>5</sup>

Opportunities for self-actualisation are the essential requirements of both job satisfaction and high performance according to a recent highly significant study in the USA. The researchers find that the wants of the employees divide into two groups. One group revolves around the need to develop in one's occupation as a service of personal growth. The second group operates as an essential base to the first and is associated with fair

5. Page 255 *The Human Side of Management*. DAVAR RUSTOM S., Editor. Progressive Corporation Private Ltd., Bombay 1969.

treatment in compensation, supervision, working conditions and administrative practices. The fulfilment of the second group does not motivate the individual to high levels of job satisfaction and to extra performance on the job. All that can be expected from satisfying the second group of needs is the prevention of dissatisfaction and poor job performance (the motivation to work).<sup>6</sup>

Today a lot of emphasis is being paid in the Services (and has been paid for some time) in providing for the physiological and safety needs of the personnel. Due attention has been paid to increases in pay and allowances as well as pension and gratuity, provision of housing facilities, transportation, children's education and other welfare amenities. While it is necessary to continue efforts for improving these facilities further, greater emphasis will have to be paid to the fulfilment of social and egoistic needs in the future.

The self-regulating ascriptive professionalism of the services guarantees an exceptional degree of dependence upon and, therefore, loyalty to the organisation by its individual members. The officers are employed according to the requirements for their development and growth. Little attention is paid to merit and achievement as the feudal system of strict seniority, requiring promotion on the basis of age, still persists in modern armed forces. The relatively low prestige and status enjoyed by some of the officers branches in the eyes of the Commanders or the officers of the "Primary Branches", their limited promotion prospects and general step-motherly treatment in administrative practices is well known. In democratic societies, such a situation may not be tolerated for long. The officers who are frustrated since their social and egoistic needs are not satisfied may move higher civil authorities or take legal redress for any discriminatory practices in the Services.

With regard to the men, participation in decision-making at appropriate levels, a greater recognition of their talents and achievements, proper development and growth in the Services and delegation of greater responsibility for the JCO/WO and NCO levels will give them the prestige, status and sense of belonging they require for fulfilling their social and egoistic needs. Liberalisation of promotion opportunities will not serve the purpose as thought heretofore. Those who remain in the ranks must be given the feeling that they are wanted. Their effective development through training

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6. Page 55 (Footnote) *The Human Side of Enterprise*. McGREGOR DOUGLAS. McGraw Hill Book Company, Inc., New York 1960.

and specialisation will give them the feeling of belonging and the sense of participation.

### THE OFFICER AND THE MAN

The Services by their very nature are authoritarian organisations with a hierarchical structure. Traditionally, the officers exercise direction and control while the men carry out the tasks as directed. The relationship between the officer and man is thus based primarily on domination.

According to Douglas McGregor, the basic assumption about human nature and human behaviour in the traditional view of direction and control is that :—<sup>7</sup>

- (a) The average human being has an inherent dislike of work and will avoid it if he can.
- (b) Because of this human characteristic of dislike of work, most people must be coerced, controlled, directed, threatened with punishment to get them to put forth adequate effort towards the achievement of organisational objectives.
- (c) The average human being prefers to be directed, wishes to avoid responsibility, has relatively little ambition, wants security above all.

If we study the relationship between the officer and the men in the Services a bit more closely we would find that the culture of the Services is based on these assumptions. Over the years, there has been considerable liberalisation in attitudes but even today the officers consider themselves an elite. Their attitude towards the men is generally condescending, they feel that the men are not responsible enough and have to be coerced, controlled and directed to get results.

This attitude of the officer was acceptable in the earlier years in authoritarian societies. The Service man found little difference between the landlord or the business entrepreneur and the Service officer. Today the position has changed and is changing. In egalitarian societies like those of North America and Australia, such feudal attitudes are not tolerated. The necessity for the existence of an officer corps is softened by playing down its separateness and by emphasising the technical context of officer training,

7. Page 33 The Human Side of Enterprise MCGREGOR DOUGLAS McGraw Hill Book Company, Inc., New York 1960.

Writing on "The Indian Military and Social Change", Stephen P. Cohen says :

".....The present structure is derived from the British Indian Army in which an elite officer class did all the thinking and planning and a peasant infantry provided the muscle. The gap between officer and soldier was enormous but it reflected the gap between two cultures. The gap has lessened today but it is still considerable, if increasingly artificial. Officers are no longer drawn exclusively from urban and rural aristocracies and jawans are increasingly more sophisticated and better educated."<sup>8</sup>

The 'man' in the Services is today very conscious of his rights as a citizen and his technical skill and attainments. He wants more responsibility and more privileges. Any attempt at denying responsibilities and privileges is strongly resented and many a time results in anonymous letters to higher authorities. Recently an attempt to change the uniforms of one of the Services was construed as undemocratic in a democratic society.

As late as World War I, British officers carried the swagger stick as a ritualistic symbol of their Command. Since their authority was based on social position and on direct domination they had to demonstrate that they were different from the men whom they commanded. They would not carry weapons, they would carry only a stick and yet get their men to fight. Today the officer will not be able to lead the 'man' purely on authority based on social position and rank. Leadership will have to be based on example and demonstrated competence. It is with these skills only that the officer will gain the affection and trust of the man.

The image of the officer today is not what it was a few decades ago. The officer is no more the "Mai Baap" of the man. The relationship is changing quite fast. The man is not appreciative of any act of the officer which smacks of superiority. While the man would welcome amenities and other recreational facilities, he would not like to be "doled" things as was done in the past. He is very sensitive and does not tolerate condescending attitudes and behaviour of the superiors. He likes interest and affection to be shown to him but values his self-respect and dignity more than ever before.

The liberalisation of the entry to the officer class from below would help in narrowing the gap between the officer and the man. However, it

8. Page 12 The Indian Military and Social Change, COHEN, STEPHEN, P. The Institute for Defence Studies and Analyses Journal. July 1969.

will be necessary to induct the 'man' into the officer class strictly on the basis of achievement and merit to avoid a class within a class.

The narrowing of the gap between the officer and the man would also facilitate a two-way communication and develop mutual confidence and trust. There may be also greater social contacts than at present as the distinctions of rank and class become more and more blurred. However, this process may also lead to undermining of discipline which is the sheet anchor of the Services.

### S U M M A R Y

During the last hundred years, and specially since World War II, authoritarian institutions have yielded to democratic concepts at all levels of society. The authoritarian culture of the Services is today not in conformity with those of democratic societies in which they function and from which they get their human resources.

The role of the Services makes it imperative for them to have a hierarchical organisation. The socio-economic changes in society, however, will require modification in the authoritarian nature of the Services. The necessity for the existence of the officers corps will have to be softened by playing down its separateness and emphasising the technical context of officer training. The gulf between the officers and the men will have to be further narrowed. Officers in the future will not be able to lead the men purely on the basis of rank or class. They will have to demonstrate their technical competence and ability to be acknowledged as leaders by the men.

Special steps will have to be taken in recruiting the right type of officer and man and for their assimilation and training in the Services. As ascriptive self-regulating organisations, the Services will also have to pay greater attention in framing rules and regulations for their personnel on the principles of natural justice and equity and provide suitable career prospects for all its personnel—without discrimination.

The men will not require the severe discipline of the past—'the Big Stick' or negative discipline—required normally for illiterate soldiers and sailors. The training in discipline will have to be aimed at creating self-discipline or discipline from within. The educated men will respond better.

In the past, the 'man' was motivated to satisfy his basic physiological and security needs. Today he desires prestige, recognition, authority, responsibility and proper development and growth. He would like to achieve and progress. Men are likely to



be frustrated if their social and egoistic needs are not satisfied. Greater emphasis will be required therefore on the fulfilment of these needs.

The existing 'superiority' complex and condescending behaviour of the officers would be resented by the men. They would not tolerate any widening of the gulf between officers and men. Traditional customs and practices based on domination will have to be discarded and replaced by the concept of participation leading to integration. This will help in cohesion for performance of tasks and also satisfy the egoistic needs of the 'man'. The relationship between the officer and man will have to be based not on coercion but on coaction.

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# INDO-PAK WAR, 1971

## SOME LESSONS

MAJOR YOGI SAKSENA

### INTRODUCTION

**W**ITH the humiliating defeat of the Pakistani armed forces in the East and consequent emergence of an independent Bangla Desh, the military situation in this region of Asia has undergone a change. It is, therefore, imperative that we carry out a reappraisal of the military threat to our country and reorganise our defences accordingly.

India has undergone a metamorphosis to become a power to reckon with in South-East Asia. Its sphere of influence is likely to expand along the Asian seaboard encompassing smaller nations. On the other hand, just as Britain, from the days of the Tudors to 1939, had tried to maintain the balance of power by keeping the greater Continental nations divided; conversely China, a power of the heartland, would always endeavour to maintain the balance amongst nations of the seaboard. Its support for the lesser of the two powers would be stronger now than ever before. To hope that China will seek a detente with a rival power-nucleus is futile. Furthermore, for China to secure lebensraum for its teeming millions, it is indispensable for it to dominate the Indian Ocean and its trading ports, militarily.

Let us examine the attitude of Pakistan, a nation born as a repository of Muslim culture and beacon to guide the destinies of all Muslims in the sub-continent.

First, the traditional centres of Muslim culture such as Agra, Delhi, Aligarh and Lucknow lie in India. Secondly, in order to guide the destinies of all Muslims in the sub-continent, it has to be militarily superior to India. Just as France, since the days of Richelieu, has seen Germany as a threat to its secure existence, Pakistan views India as a constant threat to its nationhood. Therefore, notwithstanding temporary reconciliatory postures, Pakistan will always try to humiliate India in order to fulfil its destiny.

### LIKELY THREAT

A likely course of action by China and Pakistan would be to recognise 'Azad Kashmir' as a sovereign republic which will then 'invite' them to come to its help in order to 'liberate' the rest of Kashmir from 'Indian colonial occupation'. China would simultaneously activate the

Eastern frontier as well, whereas Pakistan would inspire and support with arms anti-national elements in J&K.

Our preparations to meet this threat must necessarily take into account the lessons of the 1971 War.

It is admitted by all today that India had not foreseen the exact nature of developments in the erstwhile East Pakistan before March 1971. This was so because our present arrangement of acquisition, assessment and utilisation of intelligence leaves much to be desired. We would be far more handicapped in this respect in the case of Pakistan than we were in East Bengal. China, of course, has remained and will continue to remain a totally unpredictable enigma to our intelligence set-up. With the initiative being with the enemy, we are likely to be caught unprepared to sustain a blitzkrieg against us in Jammu and Kashmir. Therefore, it is logical that we must have a high-powered, well co-ordinated intelligence set-up in this region which will forewarn us of any movement of troops across the borders.

#### RESPONSE TIME

The Defence Ministry's Annual Report 1971-72 brings out that in March 71 the Indian armed forces were too precariously imbalanced to undertake any substantial military venture. It required several months' response-time before they were in a position to meet the threat to national security by way of demographic aggression. In this age of deterrence, there is no warning period since military action is taken to further national policy after brief diplomatic manoeuvres. It is clearly perceptible that our organisation to meet the Pak-China threat in J & K must be capable of reacting to an enemy offensive within a maximum period of 12 hours.

The strategic options available to smaller powers necessarily limit the wars to a short duration. The predominant factor deciding the duration of the war between smaller nations is the super-power interaction. None of the super-powers wants to run the risk of the regional balance of power irrevocably changing unfavourably to itself and hence only short wars, which are not disastrous, are permitted by them. A corollary to the above is that super-powers do not involve themselves militarily and hence it is a battle amongst geographically contiguous nations. This has been amply confirmed by the Arab-Israel War of 1967 and the 1971 Indo-Pakistan War.

Therefore, it is obvious that it is the troops and military hardware readily available in the theatre that will determine the issue and not the total industrial potential of the nation since it cannot be mobilised to

influence the operations in a short war. It is only logical that besides the freedom of taking decisive action, the commander of the theatre needs all the resources in terms of stock-piled arms, ammunition and equipment to respond immediately to a strategic situation. There is no time for a move forward of higher formation headquarters and movement of troops from one theatre to another. The Egyptians lost the Sinai and were compelled to accept a cease-fire even before they could reinforce the theatre. Therefore, howsoever expensive this might seem, it is essential that armies in the theatre of operations must be maintained at peak force level permanently geared for war.

The short wars have proved that Giulio Douhet's theory of attack by demoralisation, i.e. that the vital area of operations is the will of the people and not so much the armies in field, is no more valid. The Egyptians had all the will in the world and so did the Czechs and the Hungarians and yet they lost. On the other hand, in spite of enormous resistance by an entire people, the Pakistani army firmly maintained control of the then East Pakistan. Only a military defeat brought about loss of that land for them.

### THE STRATEGY

In 1914, faced with a war against two enemies and not having force enough to wage an offensive war against both, Germany decided to crush French resistance in the shortest possible time, so that she might concentrate her armies against Russia. In case of J & K, Pakistan aims to follow the tactics of Marshal Foch, of directly attacking the enemy's command prior to attacking the fighting body by deep penetration on to divisional and highest headquarters. China, on the contrary, would be fighting against our forward troops. It seems necessary that we follow Delbruck's elaboration on Clausewitz's theory of limited and unlimited wars. Against Pakistan, we should adopt the strategy of annihilation, a decisive battle being the aim, but against China, the strategy of exhaustion is the answer.

Having visualised the threat, studied the lessons of the 1971 War and the nature of strategy to counter an offensive master-minded by an allied Pak-China command, we need to devise an effective organisational set-up on our side which will meet the requirements. It seems logical that instead of operations in such far-flung areas like Ladakh, Tithwal, Punch and Akhnur being controlled from Simla or Jullundur, J&K should itself have the headquarters of an operational command (since established). Some of the major reasons warranting this step are given in succeeding paragraphs.



J&K is too distant from a Command HQ located at Simla or Jullundur for the Army Commander to be able to feel the pulse of the battle. In war, due to enemy action and radio interference, the lines of signal communication become tenuous and unreliable. The Army Commander is not able to get a true picture of the battle at frequent intervals. Therefore, the total response time before the Command HQ can react to a major development in the sector if the battle increases beyond permissible limits. With the creation of an army command in J&K, the army commander would be able to take the line of greatest decision instead of the line of least risk or involvement, since he will not have to look over his shoulder.

### TERRAIN

J&K is almost wholly a theatre of mountainous terrain whereas Punjab and a part of Rajasthan, which is also in the Western Command, is absolutely plain country. The type of operations in these two sectors are totally different; whereas in the plains, the battle hinges on armour and artillery i.e. mobility and large-scale quick manoeuvres, in the mountains of J&K, it is an exclusive infantry show with emphasis on mountain warfare i.e. dogged defence and local offensive counter-measures. Because of this difference in tactics, the units employed are different and thus there is no interchangeability of units.

The primary criterion defining the geographical limits of an army command is similar terrain and self-sufficiency of force. It must have a single well-defined role and not an amalgamation of different roles which vitiate its fighting efficiency as is the case with our Western Command. A field army is the largest formation which can be overseen by a single commander but our Western Command is too sprawled out to be a homogeneous field army. The Corps within it being differently employed tactically have different training. The units being dissimilar, it is not easy to reinforce the threatened sector by switching over troops from another sector.

In the event of a Pak-China offensive gathering momentum in Kashmir, and also Jammu to some extent, fifth columnists will be found active everywhere in the State. This menace has to be met by mobilising nationalistic opinion and active help from the civil administration and intelligence set-up. This situation, peculiar to J&K, will not be found elsewhere in the present Western Command. Counter-insurgency operations lose effectiveness if they are handled by remote control. These operations, to quote Clausewitz, cannot be considered completely without considering the political goals. It is essential that the theatre commander in J&K must be in direct link with New Delhi.

## LINEAR DEFENCE

The divisions in J&K are very thinly dispersed on ground since they are holding extended defences. Thus, they have very little counter-penetration resources. It is unexceptionable in this age of short wars that the divisions must be able to strike deep in order to capture maximum possible territory of the enemy which can be exploited as a bargaining point in the negotiations for peace. Therefore, the divisions must be deployed on narrow frontages and thus hold enough reserves. This calls for stationing of larger number of divisions in J&K if peak-force level is to be maintained in order to reduce response time and achieve deep penetration. This in turn will require a command headquarter.

As we have analysed earlier, we have to adopt two different strategies against Pakistan and China i.e. strategy of annihilation and exhaustion, respectively. Though not a must, a command HQ in J&K would be able to keep the balance between them better, rather than from Simla.

## EQUIPMENT

Similarity of terrain, operational role and training facilitates, standardisation of equipment being used in any Command. Besides the convenience of provisioning, it results in simplification of repairs, maintenance and spare parts' supply. It is then possible to have only a few types of workshops which will gradually acquire specialist know-how and will result in higher percentage of serviceable equipment within the Command. At present, because of difference in the terrain and nature of operation, the Western Command has such varied types of vehicles, guns, armoured vehicles, radio equipment and engineer plants that the problems of provisioning of this equipment, ammunition, fuel and repair and maintenance take up maximum effort of commanders and staff at all levels. With a split between these two distinct geographical regions and consequent standardisation of equipment within the two commands, the logistics problem would be far simpler.

Once the Northern Army Command is created in J&K, it would necessitate readjustment of boundaries of existing Commands. Western Command's area of responsibility should encompass entire Rajasthan where the nature of operations would be similar to that in Punjab. Both are areas of mobile mechanised warfare with emphasis on swift manoeuvres such as wide hooks and deep thrusts. The Southern Command should only have the marshy Rann of Kutch on the Western front where the problems are entirely different. It should apply itself to evolving and perfecting the tactical concepts, logistical techniques and equipment which are all in the

embryonic stage. In addition, Southern Command should be responsible for anti-aircraft defence of the peninsula and providing specialised marine-force assistance to the Navy for coastal defence dealing with any amphibious landings such as the one contemplated by the US Seventh Fleet in December 1971. The responsibility for the defence of the Hindustan-Tibet border in Himachal Pradesh should be transferred from Western to Central Command. Thus whereas Western Command would have no anomaly of terrain, the Central Command would deal with the entire mountainous terrain of the Sivalik, Kumaon, Garhwal ranges and Terai region bordering Nepal. This would ensure that both Western and Central Commands would prepare for a threat from one quarter only i.e. Pakistan and China, respectively. This would greatly enhance the battle efficiency of both these field armies.

### CONCLUSION

We have seen that response time has been the bane of our armed forces. In 1962, with just six weeks available, we blundered into a military disaster; in 1965, we achieved a favourable stalemate after four months' preparations; in 1971, we required eight months' mobilisation period to achieve victory. Now, with a belligerent China keen to stifle the military growth of India as a rival power nucleus and an ever-hostile Pakistan capable of deploying its entire armed forces on our Western borders (without any liability in the East), Jammu and Kashmir appears to be the vital area of operations for India. Our intelligence set-up having some inherent weaknesses, the response time we are likely to get would be almost nil. In short wars, where the formations in the field decide the issue and not the 'will of the people' it becomes a must to organise our forces at peak-level of reaction with the commander of the theatre having complete freedom of immediate response. Therefore, creation of a Northern Army Command in J&K would be the most suitable answer to this challenge. It would be best suited to counter subversive activities peculiar to J&K. Besides, it would result in well-defined roles, unified training, similar tactical employment and standardisation of equipment for all Commands.

# MODERN CONCEPT OF MANAGEMENT AND ITS SCOPE IN THE SERVICES

SQUADRON LEADER K S TRIPATHI

**T**ODAY in the din of, and clamour for management, it is often forgotten that it is the defence forces which fathered its first principles. Long before the Industrial Revolution in the second half of the 18th century, when principles of industrial management began to be developed, the army had evolved sound principles of organisation and also those of planning, co-ordinating, directing and controlling.

Perhaps the first armies to exist as organisations were those of the Egyptian Pharaohs at approximately 3000 BC. The great battles of the Ramayana and the Mahabharata age were fought between 2500 BC and 1500 BC. Considering that the war of the Mahabharata lasted 18 days, when at such remote antiquity wars hardly lasted a few hours, great organising, planning and co-ordinating capabilities would have been required to wage a war of such magnitude. It was, however, during the time of the great Persian ruler Darius (521-485 BC), that conscious efforts were made to plan and co-ordinate the activities of the troops. Darius fought a number of wars and successfully coordinated his land and naval forces to bring to bear their combined strength against the enemy. The great Macedonian rulers, Philip II (382-336 BC) and his son, Alexander the Great (356-323 BC), contributed considerably to the development of the staff organisation. Although Alexander's fame as a military genius eclipsed that of his father, it is Philip II who deserves the modern manager's gratitude, for it was he who established enduring principles of organisation and bequeathed a set-up to his son, which the latter so brilliantly employed in his campaigns. Philip II, not only introduced a hospital organisation as a regular part of the army and the institution of a provost marshal for the overall maintenance of discipline, but also vastly improved the supply and transportation systems.

The contributions of Frederick the Great, Napoleon, MacArthur, Rommel, Montgomery and Eisenhower are of recent history and too well-known to be dealt at length.

The contribution of the defence forces to the growth of the principles of management, even though great, had limited validity. The aim of the defence forces was to fight wars and to win them to the complete exclusion of any other aim. The limited objective of the defence forces could hardly provide ground for a fuller development of management, nor had the defence forces resources to initiate research on management as a separate branch of defence science.

The Industrial Revolution, bringing in its wake invention of new machines and giving rise to large-scale enterprises, necessitated a serious study of management to increase production. Although it was Louis Brandeis who coined the phrase scientific management in 1910 in a statement before the United States Interstate Commerce Commission, the driving force behind the movement of scientific management was Frederick W Taylor (1856-1915), who lifted management from an individualistic, rule-of-thumb approach and placed it on a scientific footing.

In the first half of the twentieth century there developed, in contrast to Taylor's scientific management, a body of knowledge known as "Administrative Management Theory". Henry Fayol, a French industrialist, called the father of management, was the principal exponent of this theory. He defined administration in terms of five primary factors—planning, organisation, command, co-ordination and control. These five factors of administration have become the foundation for considering the basic process or functions of management. Fayol and his followers held the view that management was a universal function and that it could be applied not only to business but also to military, religion, government and to any other organisation. Fayol enunciated fourteen principles of management, important among these being Division of Work (Specialisation), Authority and Responsibility, Unity and Command, and Scalar chain (chain of superiors). Another eminent thinker was Max Weber who is considered one of the founders of modern sociology and a significant contributor to economic, social and administrative thought. He is known mainly for his bureaucratic model. He viewed bureaucracy as the most efficient form for complex organisations.

The classical or traditional school of Taylor, Fayol, Weber and others underwent great changes due to numerous forces acting within industry and in the external environment. Companies, which early in the twentieth century, confined themselves to a few products, later grew into heterogeneous leviathans with complex organisations. Technological revolution, leading in more recent times to automation, computers and



information technology, altered the traditional relationships between man and machine. Professor J.K. Galbraith found technology fundamentally changing the organisations. "The requirements of technology and planning have greatly increased the need of the industrial enterprise for specialised talent and for its organisation", he said in his book "The New Industrial State", published in 1967 (p 57).

The changes were so challenging and the need for understanding and integrating them so great and urgent that there was a mushroom growth of research institutes dealing with such diverse fields as biology, anthropology, sociology, industrial and animal psychology, mathematics, logic, political science and even philosophy. As a result of these studies two primary schools of thought emerged—the behavioural sciences and the management sciences.

The behaviour scientists emphasise the psychological system with primary consideration for the human resources. They use an open-system approach and consider numerous variables which the traditionalists had excluded from their closed system models. Emphasis has shifted from the structure and the task models of the traditional school to an understanding of people's behaviour, their interaction and cooperation—in actual organisation. The pioneer of the human relations movement in industry was Elton Mayo, who conducted a series of studies at the Hawthorne Plant of the Western Electric Company between 1927 and 1932. Mayo and his associates established two primary concepts of human relationship. The first was a basic concern for man in the organisation. This was called industrial humanism. Mayo called upon the industrial establishments to give greater recognition to human values. His second major contribution was his suggestion to utilise research methods of the behavioural sciences for a study of organisational behaviour.

The human relationists, as Mayo and his associates are called, emphasised "democratic" rather than "authoritarian" leadership patterns. They laid down that it was important to develop effective communication channels between the various levels in the hierarchy that allow the exchange of information. Thus "participation" became an important approach of the human relations movement. Among other important writers who helped develop this democratic, participative approach were Leavitt, McGregor and Bennis. Leavitt advocated a more equal distribution of powers in organisations, McGregor emphasised the desirability of replacing the authoritarian theory by the more democratic-participative theory, while Bennis prophetically declared that "democracy is inevitable".

The management science movement, which was the second major revolution, gathered momentum after the end of World War II. This movement is also known as operations research (OR) or quantitative analysis, and, in many ways, is considered a descendent of the earlier scientific management movement, with the addition of more mathematical and sophisticated methods, computer technology and an orientation towards broader issues. In contrast to the behavioural scientists, who had a psycho-social orientation, the management scientists or operations researchers have an economic-technical orientation, and mainly belong to such disciplines as mathematics, engineering, statistics and economics.

The management science emphasise optimal managerial decision-making. In fact, operations research has been defined simply as applied decision theory. As Miller and Starr said, operations research "uses any scientific mathematical or logical means to attempt to cope up with the problems that confront the executive when he tries to achieve a thorough-going rationality in dealing with his decision problems". (Executive Decisions and Operations Research", Prentice—Hall 1960, p 104). Because of the significant contribution of operations research (OR) to decision-making, many medium and large industrial and business organisations have established OR groups and employ approaches such as linear programming, game theory, queuing theory, statistical decision theory, systems analysis, simulation, Monte Carlo techniques and other similar analytical tools. Government organisations, particularly defence, transportation and civil aviation are also increasingly employing management sciences approach to improve their efficiency.

Some of the recent developments like systems analysis, cost effectiveness analysis and network analysis have also a management science orientation. The defence forces use the term "systems analysis" to describe an integrative decision-making process using management science approaches. According to Hitch, systems analysis at the national level "involves a continuous cycle of defining military objectives, designing alternative systems to achieve those objectives, evaluating these alternatives and the other assumptions underlining the analysis, opening new alternatives and establishing new military objectives". (quoted by Kast and Rosenzewing in "Organisation and Management—A Systems Approach", McGraw Hill 1970, p. 102)

Studies in the field of behavioural and management sciences led to such divergent theories that they often confused the manager. During the past few years an approach has been worked out which seeks to synthesise and unify knowledge in many fields. This is the systems approach. This

concept is being applied now in many areas of organised human activity to remove confusion and to bring in orderly execution of plans.

What is systems theory? A system has been defined as an organised or complex whole; an assemblage or combination of things or parts forming a complex or unitary whole. The term system covers a broad spectrum including our physical, biological and social worlds. Its main function is to provide a basis for the integration of scientific knowledge. An example of what a system is can be shown in the human body, which while being a complex organism including, inter alia, a nervous system, a circulatory system and a skeletal system, performs a harmonious role synthesising the functions of various sub-systems. Transportation systems, communication system and various economic systems are other examples which are also based on a similar concept.

Although Systems Approach has been applied to numerous fields, its application to the study of psychology, sociology, economics and management theory has yielded highly satisfactory results. The various types of behaviourism in psychological theory have given way to the holism of gestalt psychology and field theory. The word gestalt is German and means configuration or pattern. Applying gestalt theory to the study of individual personality, Kurt Lewin found that purely psychological explanations of personality were inadequate and that socio-cultural forces exerted equally powerful influence. He, therefore, viewed personality as a dynamic system, influenced by the individual's environment. Holism is the concept that all systems—physical, biological and social—are composed of sub-systems. The whole is not just the sum of the parts, but the system itself can be explained only as a totality. Holism is basic to the systems approach. Another related concept is "functionalism", which emphasises integration of parts and subsystems into a functional whole.

In sum, a system is composed of subsystems of a lower order and is also part of a supersystem. Thus there is a hierarchy of systems. The systems approach has also given birth to the discipline of cybernetics with its emphasis on communication and information flow in complex systems. The concept of feedback—one of the cybernetics models—is important to understanding as to how a system maintains a state. Through the process of feedback, it continually receives information from its environment which helps it to adjust.

The systems approach is directly related to organisation theory. It helps the organisation to maintain a dynamic equilibrium by importing

material, energy and information from its environment. The challenge which systems approach poses to a modern manager consists of integrating and balancing the various subsystems and their activities in the environmental setting.

The defence services today have not only the onerous responsibility of defending their nations against enemy attacks but also the increasingly difficult task of keeping their complex weapon-system in a state of operational readiness. In measuring up to their growing responsibilities the defence forces require a high level of efficiency in the use of human and material resources. Principles of co-ordinate human effort are useful in every enterprise but they are of vital importance in the defence services for the very survival of a nation depends upon the skill with which these principles are used to achieve the highest degree of concerted human endeavour.

A great deal of research has been done in modern times in the field of industrial management. The principles and functions of management have been evolved after careful study and practical application. The results have shown an enormous increase in efficiency and productivity. Defence services, which now partly function as industrial establishments particularly in areas where they are directly involved in production or maintenance of their equipment, must take advantage of the industrial resources and apply the principles and functions evolved by them to achieve greater efficiency. A military commander is already a leader, well conversant with the principles of war. What he needs developing is the managerial qualities which would enable him to promote better esprit de corps and achieve better group results.

Modern wars depend on the general industrial potential of a nation and as today's war-machinery comprises, in its folds, numerous production, repair and maintenance depots, a commander can no longer depend only on his leadership qualities. The men he is called upon to command today are not necessarily the seekers of glory on the battle front, nor are they possessed of such sense of bravado and heroics as perhaps were the soldiers of the days gone by. Brave words of the commander do not unduly sway them these days. They may still fight with guns on the battle-fields but they are semi-technicians and some of them are even technocrats who are not quite as inspirable by the Churchillian obiter dicta as were the Royal Air Force fighter pilots.

The concept of leadership as it prevailed during the days of Frederick the Great or Napoleon or even during the days of Montgomery and



Rommel has now changed. The scope for personal valour has shrunk. The success of a mission does not depend so much on the personal initiative and example of a leader as on the ability of his group to accomplish it through team-work. The supreme need for a leader today is to create among his men the environment which will facilitate the accomplishment of the group objective. The men today are better educated and, with several avenues of employment, some offering better career prospects than the defence forces, more prone to doubt, question and argue. A commander no doubt has the authority to enforce discipline and get his orders obeyed but authority alone would be a poor instrument today to get objectives accomplished.

A Commander must learn to elicit cooperation from his men and not only to issue instructions. Industrial management has devoted considerable attention to developing good human relations for better productivity. There is much to learn from these developments, for man is not a machine and his personal growth should occupy as much, if not more, attention of the commander as the fulfilment of his higher objectives. In fact, the personal advancement and welfare of the men must now be incorporated as an integral part of higher defence objectives, for without good human relations and necessary motivation no soldier, sailor or airman would face the peculiar problems of military operations. If peaceful pursuits of producing more and better goods require such refined cultivations of the worker in the industry, the man in the uniform who is expected to lay down his life in the field, obviously requires greater cultivation. It is the crucial test of leadership in the defence forces, today, to be able to elicit the loyalty and willing and cheerful cooperation of men, for the military profession is becoming increasingly demanding and exacting and unless those who don military uniform are assured of better understanding they would not warmly respond to the increasing burdens of their complex profession. Soldiering today demands a full time and a life-long devotion and those who choose this exacting career, demand a better quality of leadership.

Besides, armed forces personnel are today more closely dependent on their weapons than ever before. Man and machine relationship has assumed new dimensions and in fact the machine is beginning to dominate men. Obviously then a leader has to create an environment not only conducive for better group results but also for better man and machine relationship. It is here that a leader has to fall back more upon his managerial qualities than on his qualities as a military commander. It is more how he plans his work, utilizes the manpower available, guides his



subordinates, and controls their activity—all these constitute managerial qualities—than how he displays his personal bravery, example, enthusiasm or other qualities which the great leaders of the days gone-by used to possess.

It is, however, not possible to divide the qualities of a leader and a manager into water-tight compartments. A good leader should know how to respond to the changed circumstances and should be able to use principles of management, not as a substitute to the principles of leadership but as a complement to them. Dynamism and ability to enthuse along with capability to coordinate and control activity, will produce better results. The qualities and functions of a leader and manager are not mutually exclusive of each other but are complementary. Military management is not exactly industrial management and if the leaders were only to be managers without some of the qualities like decisiveness, boldness, courage etc.—qualities more germane to military professional than to civil calling—they would achieve little, but if they retained their basic qualities and built upon them the qualities of a good manager they would prove eminently successful.

Maintaining a defence force is an exceedingly costly affair today, particularly for a developing and democratic country, determined to base its society on a socialistic pattern. Numerous socio-economic problems compete for priorities and, in fact, the urgency of providing basic needs to teeming millions—presents such a gigantic challenge that the country can hardly afford to provide adequate resources to maintain a defence force commensurate with the demands of our national security. Whatever resources the country can muster for defence force have therefore to be judiciously employed to get optimum security.

In the first place, the armed forces must select a weapon system which gives us not only the best value for the cost but also assures national security in the foreseeable future. Here application of the principles of system analysis would help us select such a weapon system. The system analyst would first study the problem, define it clearly and precisely, examine the alternatives, explore new alternatives, carry out a comparative appraisal of all alternatives, and correlate them to the principle of cost-effectiveness, and finally select a solution which may give us not only the best return for the money but which may also be a forward-looking, future-oriented answer to our problems. Modern military equipment, be it an aircraft, a tank or a submarine, is so costly and it takes so long to develop it that unless great care is taken to select it,

national security could be jeopardised. The system analysts bear these factors in mind and work to seek answers which escape the attention of ordinary planners. The systems analysis covers a wide spectrum and its application is best suited to areas where broad policy decisions have to be made out of a wood of alternatives. The science of management can also be useful in determining the strategic concepts and in correlating the weapons system to such concepts. However, it is necessary that the system analysts consult the military commanders before they finally select their solutions, for theoretical considerations may amount to a little more than beating wings in the void. If the commanders themselves are trained to orientate their thinking in accordance with principles of systems analysis they would combine the practical wisdom and empirical knowledge of military affairs with the analytical process and comprehensive thoroughness of systems analysis. The term, "appreciation" in military parlance denotes something similar to the process of systems analysis and the commanders while "appreciating" a military situation often run through the entire gamut of sifting alternatives but the awareness that this science lays a great deal of emphasis on exploration of new alternatives would enable military leaders to enlarge the scope of "Appreciation".

The principle of cost effectiveness whereby the maximum utility of an item is ensured in relation to the money spent on it, is another factor which assumes considerable importance in selecting a weapon system. In fact money is so scarce and our requirements so big that careful thought should be given to getting the best of the equipment.

Having selected weapons system in accordance with the requirements of the overall defence strategy, the next problem is evolving tactical principles and marrying the weapons to these principles. Although defence forces continually carry out numerous exercises to test their weapons and to learn practical lessons, yet application of new management technique in the use of weapons would immensely help the users to improve their performance. How could a maritime reconnaissance aircraft spot enemy ships and submarines in a given area, or artillery fire be directed more effectively towards enemy positions, how could a ground attack aircraft, or a tank improve its aim and fire power? All these problems could be taken up by those who specialise in operations research (OR). These experts pick up specific problems and through mathematical models suggest solutions which could vastly improve performance. In contrast to the system analyst who selects wider issues and seeks to optimise the large, the operations researcher selects a precise

problem, optimises the small and basing his study on mathematical analysis gives specific answers, almost reduced to mathematical formulas. The application of operations research to specific defence problems, be they operational, administrative or maintenance, would ensure a vastly improved and more efficient force. Or is now being increasingly used in industry and the results have been so impressive that it is being integrated as an essential part of managing a modern industry.

Another area where the defence forces can immensely benefit from the modern concept of management is that of organisation. Organisations based on the concept of systems, emphasising the synthesis of subsystems, would eliminate friction, duplication, waste and delay and would ensure smooth and efficient functioning. In fact, the concept of systems should now be the basis for setting up any organisation.

Technological explosion during the past few decades has brought about unprecedented complexity and sophistication in military weapons. Each new weapon which finds its place in the inventory is accompanied by thousands of new and different kinds of spare parts and supporting equipment. The long gestation period in the development of new weapons, the years of research, trial and error and the huge cost involved in such a development impose grave responsibilities on the users to plan, organise, co-ordinate, control and direct the procurement, storage and supply of these weapons and spare parts.

A great deal of research has gone into developing the science of material management to cope with the new challenge. New formulas and methods have been devised to efficiently manage the acquisition, possession and usage of modern weapons. With a view to achieving maximum economy, new formulas have been worked out to determine the most economic order quantity (EOQ) and to apply such current principles of inventory-control as the ABC Analysis. According to this analysis regular items are divided into A—high value items, B—medium value items and C—low value items. This system helps the inventory holder to devote time and attention to items in accordance with their value.

In the United States of America, the entire system of common military supply items was reorganised in 1962, based on modern principles of material management. Mr McNamara, the then Secretary of Defence, integrated all common supply and service activities of the defence forces into what he called "Defence Supply Agency" (DSA) and introduced scientific methods to eliminate disorder, duplication and waste. With

improved inventory control, more realistic purchasing of spares and supporting supplies and greater reutilisation of the excess, Mr McNamara achieved highly encouraging results. In 1958, surplus property worth \$ 8.4 billion was locked up in military stores. On reorganising the set-up, Mr McNamara reduced this property in 1962 to \$ 4.1 billion.

For countries which still depend for most of their military supplies and equipment on foreign countries, there is no alternative to introducing principles of material management. As these countries generally procure their military requirements from outside, they, of necessity, have to purchase what is offered and not necessarily what they require. This leads to a bizarre hotchpotch of equipment. The only way to introduce some order into this chaos is to plan, organise, co-ordinate, control and direct in a manner which ensures maximum economy and efficiency.

In a competitive age like ours when it is not only the physical prowess of the men who done the military uniform which matters, but when harnessing the technological advances is equally, in fact, more important, concepts of modern management must be carefully understood. The modern management expresses its belief in systematic organisation of human activity and harnessing the resources towards better and ever-increasing productivity. The defence forces, which have to give an account of their efficiency, at the time of grave national emergency, must therefore adopt the modern concepts of management as the very foundation on which they must be based and organised.

# MOUNTAINS AND ARMED HELICOPTERS

MAJOR DIPES LAHIRI

**S**INCE the introduction of tanks in World War I, no other military hardware has raised as much stir as the armed helicopter and the controversy over its effectiveness is still on. The armed helicopter has proved its worth in limited operations, particularly those of a counter-insurgency nature. However, military leaders doubt its effectiveness in conventional warfare. But in jungle and mountain terrain, armed helicopters may prove to be the decisive factor and the balancing force between defeat and victory.

In the context of the present situation, it can be assumed that any armed confrontation will most likely be along our mountainous borders. Be it an insurgency inspired by a foreign power, or a limited conventional war, a large part of the terrain will invariably be mountains and jungles. The terrain will have very little surface communications and will primarily consist of deep and narrow valleys flanked by high impassable cliffs. Surface communication will in all probability be limited to a few roads along the streams, and lateral roads connecting the parallel axis will be absent. Also the nature of terrain will not allow construction of airfields in the mountains close to the battlefields.

This terrain will pose a serious limitation on the ground troops, in that, whereas the infantry will be able to move forward and establish contact with the enemy, the supporting artillery fire will be limited to a small animal pack artillery organisation. The use of tanks can be ruled out, and as such maintenance of momentum which is normally achieved by tanks in plains will be absent. This also means that the only fire support available to the infantry will be what can be carried on man or animal pack. When this is viewed against the limited carrying capacity in the high-altitude terrain where most of the operations will perforce have to be conducted, it will be appreciated that fire support will be very limited, and to achieve success, the lack of artillery and armour will somehow have to be compensated.



These disadvantages can, however, be offset by the introduction of armed helicopters. This article deals with the possibility of use of armed helicopter in our mountain formations. Air assaults may vary in terrain or type of operations but the general principle and applications will have very little difference.

A ground attack fighter aircraft has the advantage of being able to meet out much more punishment than an armed helicopter, and is itself not so vulnerable to ground fire. But an examination of the limitations of fixed wing ground attack aircraft in the mountains would probably rule out the use of this type of aircraft. The present-day fighter with its tremendous speed and very large turning radius, does not measure up to the requirements of supporting ground troops in the mountains. The restricted flying space available between high mountains will limit the approach to one or at the most two directions. This will also mean that the fighter will either have to fly in singly or at the most in pairs. As the limited flying space gives very little choice in "fly in" or "exit" direction, the enemy's low level air defence weapons will be utilized in covering the most likely approach and exists, and the losses to our own aircraft will be considerable.

It is also worth considering that as the battle progresses in our favour the battlefield will move further away from airfields in the rear areas. We have also seen that the type of mountains obtaining on our frontiers do not allow construction of modern airfields capable of handling transonic jet aircraft. This would also mean that an aircraft flying from airfields in the plains and detailed to support ground forces in the mountains will spend its time in flying to the objective and back. The actual time it can be over target area will be very small in comparison with overall flying time.

Also consider the tremendous speed of the modern aircraft. Identification, selection and engagement of targets will pose great problems to the pilots. Whereas the ground liaison officers will do their best to brief the pilots of the sorties, the effectiveness of these briefings is doubtful in view of the distance between the airfield and the battlefield and the inevitable fog of war that will surround everything.

Whereas in the plains it is possible to carry a detailed last-minute briefing when the aircraft is in the contact point, in mountains, such briefing may not be effective as the pilot will hardly be able to see the target unless he is flying almost overhead.

The helicopter on the other hand has a marked advantage over the fixed-winged fighters in the mountains. Due to its slower speed it can

easily pick out its targets and shoot it up at leisure. If the fire is corrected by a forward air-controller, it will probably be more accurate than artillery fire support and be of great help to our ground forces.

The manoeuvrability of the helicopter will enable it to approach the target from any direction and get away in any direction. The enemy's low-level air defence weapons which are normally sited to cover the likely approaches and exits will hardly have any effect against the helicopter. The manoeuvrability of the helicopter will also help in making it possible to send bigger formations to the target area. We had seen that in the case of fighter aircraft only one or at the most a pair would be able to engage the target in the mountains. On the other hand, even in a very limited space it will be possible to send in four helicopters together and thus engage the enemy from more than one direction. The use of helicopter in the mountains will have another big advantage. The bases will be fairly close to the troops who are engaging the enemy and very close liaison will be possible between the ground troops and the armed helicopter unit. In practice, the forward aircontroller will be able to move from his helicopter base, listen to the ground commander's orders and go back to brief the pilots in the helicopter base and then move upto his position and be ready to direct the armed helicopter during the assault. Due to the nearness of the helicopter base, all the pilots would have a far better picture of the battle. In fact, in all probability the helicopter base will not be more than 30 minutes flying distance from the forward localities.

However, helicopters have one great disadvantage when compared with fighter aircraft. Due to their limited range, they will not be able to support ground troops separated over a great distance. Whereas the same squadron of ground attack aircraft is capable of supporting troops who may be located two hundred miles apart, a similar squadron of armed helicopter may only be able to support ground troops within a radius of 30 to 40 miles.

This naturally leads us to the next question, as to what should the organisation of armed helicopters be, how should they be allotted and who should command them? In spite of interservice rivalries that will arise, we should follow the age-old principle that the service that utilises a particular unit in battle should have complete control over the unit. In this case it goes without saying that the army should have complete control over the armed helicopters and in fact both the helicopters and the personnel should be from the army.

It is interesting to note that in the mountain the armed helicopter will actually fill the vacancy created by the missing tanks. In fact the roles will be so strikingly similar that armed helicopters can be called airborne cavalry of the mountains. It therefore follows that the ground forces commander should be the best judge to utilise the armed helicopters and be the sole commander of this new force.

Keeping the above in view, we can visualise the organisation that is likely to emerge. It is felt that a squadron of armed helicopter should be an integral part of a mountain division. However, availability and economical restrictions may not make this possible under which circumstance a squadron will only be available to a Corps. But this will suffer from the disadvantage that we will not be able to concentrate sufficient air effort at any one point, and there will be a tendency to fritter away our resources. Therefore it will be judicious to have one squadron per division.

We had seen earlier that the armed helicopters in the mountains almost replace the armour in the plains. In actual fact, the role of the armed helicopter will be so strikingly similar to a Divisional Armoured Corps regiment, that the organisation will have to be tailored on similar lines. The divisional commander will naturally be the overall Commander and have complete control over his armed helicopter unit. It is needless to say that for the sake of better understanding and easier administration all the personnel of the armed helicopter unit should belong to the army. The pilots, who will be army personnel, will have better understanding of the tactical battle.

It is obvious that the Divisional Helicopter Unit will have to be subdivided into a number of sub-units, as it is visualised that the land battle in the mountains may entail a brigade group being detached and operating on a parallel axis away from the main axis. It is visualised that the helicopter unit should be subdivided into three helicopter sub-units (flights) and one administration flight. Three armed helicopter flights will ensure that one flight can be placed in support of each of the mountain brigades.

At this stage it is worthwhile discussing the proposed administrative arrangements for the Divisional Helicopter Unit. The yardstick should be based on the fact that, as is done for normal army equipment, the maintenance should be done as far forward as possible. The proposed administrative flight should be able to carry out day-to-day repairs. For major repairs, the system that exists for the Indian Air Force should be followed.

It is visualised that the helicopter base will be located within the Divisional Administrative Area. The task of refuelling and arming will be undertaken by the administrative flight at this location. The supply of fuel and ammunition, however, will be as for any other divisional unit.

Administration will be a very important factor and will affect the employment of the armed helicopters. Like the armoured unit, very sound and flexible arrangements will be essential due to the flexible nature of employment, speed of movement and long range of action. The requirement of various administrative echelons can be determined only after trials have been carried out in the employment of armed helicopters in support of ground troops. But in a mobile operation it will be essential to move a section of refuelling and rearmament echelons well forward.

Having discussed the proposed organisation and the administrative arrangements, let us examine the likely employment of armed helicopters.

In offensive operations the armed helicopter will mainly be used to protect the flanks and to provide intimate fire support during assault. In an advance operation the main bulk of the infantry will have to advance along the main axis. Even a very small enemy force located on features dominating the road axis will be able to impose considerable delay. The employment of armed helicopter will ensure early warning about the enemy's location, and if it is a small position, the fire power of the helicopter may result in the removal of these minor oppositions. If the position is held strongly, mounting of an attack will be required to clear the enemy stronghold. In this case also the armed helicopter will be very useful. Because of its unique flying capabilities it will be able to protect the forming up place by ensuring that small parties of the enemy do not move up to the location and put in a spoiling attack. At the time of actual assault, the armed helicopter will be able to provide very close and intimate fire support and could almost take up the role of tanks in "shooting in" the infantry. It is also likely that even after our own troops have achieved partial success, there will be small pockets of resistance in the enemy defences that will hold up our attack. Should these pockets be located higher than the ground captured by our troops, further advance would be very difficult in view of the difficulty in locating the enemy positions. The armed helicopter, being on an elevated plane, will be able to locate and effectively engage the enemy positions and neutralise or destroy them.

Once the objective has been captured, the armed helicopters could be used to break up the enemy's counter-attack. In actual fact because



of the observation afforded by the helicopters, the enemy's counter-attack can be broken up at the preparatory stages. Even when the assault has been launched during night, the presence of armed helicopter at first light will help us to consolidate our gains. Apart from this as we have seen earlier the fire support afforded by armed helicopters will be considerable in a normal set piece attack.

In a defensive battle also, the employment of armed helicopters would affect the whole operation considerably. In the mountains the approaches to any objective will be limited. The enemy will perforce have to adopt one of these limited approaches. Effective patrolling by armed helicopters will prevent the enemy from successfully concentrating and moving up for their attack. Apart from this, during the counter-attack stage the presence of armed helicopters will be of tremendous assistance.

In the mountains, defenders will often find themselves fighting in isolation. They may have to hold on to their defences when the enemy makes repeated attempts to capture the position. As the enemy cannot engage the whole of the force, he will choose a weak spot and concentrate his force against it. Once the enemy's pattern of operations becomes apparent, it will be possible to concentrate the helicopters and prevent the enemy from achieving success.

Should a withdrawal be necessary, the employment of armed helicopters will influence the battle considerably. Timely employment of armed helicopters will prevent our forces from getting too deeply involved with the enemy and assist in extrication of our forces.

However, it should never be doubted that the use of fixed wing ground attack aircraft will cease once armed helicopters are taken in use. As it is apparent from past cases, every weapon system will give birth to a new family of weapons to counter them. The anti-armed helicopter system will naturally employ faster fixed-wing fighter aircraft which with their advantage of speed and altitude will cause considerable damage to the armed helicopters. Also, the armed helicopters will have serious limitations in regard to their service ceiling and when air strike is required at higher altitudes. Where helicopters cannot reach, ground attack fighters will have to be used.

The armed helicopters will only take on the task of close support and armed recce. But the other tasks i.e, interdiction, counter air operations and allied tasks will continue to be carried out by fighter aircraft as before.



In conclusion, it can be said that there exists a vast unexplored field of use of armed helicopters in support of ground troops in mountainous terrain, and the pattern of warfare that is likely to emerge is unique. No other nation has experienced a similar situation under similar conditions. We, ourselves, will have to analyse the problem, examine the feasibilities and ultimately evolve the doctrine for overcoming the difficulties.

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## THE PSALM OF THE SERVICE OFFICER

IF it be found of me that I have left behind a record of justice, despite punishment apportioned to and thoughts for the peace and happiness of my fellow men despite their travail and hardship, may it be said of me that I have done my duty by my fellow men.

IF it be found of me that I have left behind a record of honour, honesty, integrity and loyalty to my country and men, may it be spake of me that I have done my duty by my country.

IF it be found of me that I have left behind a record of love of my fellow men and love of my country and walked in the guidance of my conscience, let it be said of me, "He hath done his duty by his God."

COLONEL A.J. BRAGANZA

# THE ORDNANCE DEPARTMENT

## 1850-1900

DR. K M L SAXENA

### ORIGIN OF SEPARATE DEPARTMENTS

The Ordnance Department in India carried out the duties of providing, holding and accounting for all munitions of war and military stores, except clothing and necessaries, food, bedding and furniture required for the use of the several branches of the army in India as well as the volunteer forces.<sup>1</sup> This duty in 1857-58, devolved on three separate establishments, known as the Bengal, Madras and Bombay Ordnance Departments. The first was under the immediate control of the Government of India, while the others were governed by their respective Local Governments.<sup>2</sup> Their separate formation dated back to a period when great difficulties existed in intercommunication throughout India. It was then unavoidable that each Government should be in a position to provide the ordnance stores required for the efficient equipment of the army under its control. For, owing to imperfect communications references to a central authority would have resulted in delay. Hence a responsible head of each Ordnance Department came, as a matter of necessity, to be attached to the several Governments. They advised them on all matters pertaining to the supply and supervision of warlike stores.<sup>3</sup>

### ORGANISATION IN 1858

In 1858 the Ordnance Commissariat Departments, as they were then called, were each under an officer styled the Inspector General of Ordnance and Magazines. The larger stations were administered by Commissaries of Ordnance, 1st Class, while those of somewhat less importance were under Commissaries of Ordnance, 2nd Class. The establishment in each Presidency comprised a number of Deputy Commissaries. Deputy Assistant

1. Eden Commission Report, Parl. P. (Commons), 17, 1884-85, para 440.

2. Ibid.

3. Ibid, para 441; see also

Parl. P. (Commons), 735 (V), 1831-32, Minutes of Evidence, Qs. 628-30

Commissaries, Conductors and Sub-Conductors.<sup>1</sup> The factories producing gun-carriages, gun-powers etc. were under Superintendents and Agents. Thus the gun-powder manufactory at Ishapur and the gun-carriage factory at Fatehgarh were under Agents; and the Foundry at Cossipore was under a Superintendent. A number of Warrant Officers, called Conductors and sub-Conductors, were attached to them.<sup>2</sup>

For the storage and manufacture of weapons and ammunition, the arsenals, magazines and depots were controlled by Commissaries of Ordnance. The arsenals and magazines, especially, were located at places of strategic importance or at large centres of trade, affording as they did facilities of carriage and a body of artificers to work in the workshops.<sup>3</sup>

#### REFORMS AFTER THE MUTINY

The Inspector General of Ordnance and Magazines in Bengal was assisted by an officer called the Principal Commissary of Ordnance. But he was encumbered with a large amount of work, and the superintendence and control of the department consequently suffered. The Military Finance Department had recommended the division of the Bengal Presidency into two parts for the administration of this important department, creating a separate ordnance department for the Punjab. But as the Presidential feeling was strong at the time, and the advantages of railway and telegraph had not made themselves conspicuous, it was felt that such an arrangement would go against uniformity of system. Hence in 1862 it was preferred to elevate the Principal Commissary to the position of a Deputy Inspector General of Ordnance and Magazines.<sup>4</sup> This officer was to superintend the office in the western portion of the Bengal Presidency, for which he was the departmental adviser of the Government. Though he was to remain subordinate to the Inspector General, he was invested with the power of carrying out all departmental details without reference to him.<sup>5</sup> In November, 1863 the salaries of Inspectors General of Ordnance at the three

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1. M.D. Progs, Oct. 1861, Nos. 411-15  
M.D. Progs, June 1862, Nos. 278-83  
M.D. Progs, July 1862, Nos. 145-47
  2. Ibid.
  3. Ibid.
  4. Mil. Des. from India, No. 255, 22 July 1862  
Mil. Des. to India, No. 397, 23 Oct. 1862  
M.D. Progs, Oct. 1861, 411-45  
M.D. Progs, June 1862, 278-83  
M.D. Progs, July 1862, 145-47
  5. Ibid.

Presidencies were raised and brought to the same footing with the other departments.<sup>1</sup>

#### STEPS TO ASSIMILATE EQUIPMENTS

At this time the two most important points in connection with the efficiency of the Ordnance Department in India were<sup>2</sup> :—

1. The assimilation of the arms and equipments in use with the artillery in India to those adopted in England, and
2. The mode of supply of military stores from England.

After the Mutiny these questions assumed great significance. The armies were thereafter to be employed more and more on a combined basis, and not merely on Presidential basis as in the past. Hence it was imperative that their equipment and stores should be similar. Various arrangements were made in this direction. Officers were sent to England to learn the manufacture of ammunition for the rifles which the European troops were bringing out to India.<sup>3</sup> The Ordnance Department in India was kept informed of matters affecting ordnance stores in India.<sup>4</sup>

As for the second point, India depended for its supplies of guns, carbines, pistols, carriages for guns, etc. on Britain. Indents for ordnance stores were forwarded to England.<sup>5</sup> In case of need for a special type of gun required to meet the somewhat peculiar conditions of India, for example for mountain warfare on the north-west frontier or on the borders with Nepal, the need was communicated to England, where designs were drawn according to the specifications supplied by India. and orders

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1. Go No. 310, 5 Apr. 1864  
Final. Lr. No. 144, 30 Nov. 1863  
Mil. Des. to India, No. 59, 24 Feb. 1864  
M.D. Cons. Dec. 1863, No. 1536  
G.O. No. 812, 31 Dec. 1863  
Finl. L. No. 102, 18 Aug. 1863  
Mil. Des. to India, No. 381, 7 Nov. 1863
  2. Mil. Des. to India, No. 132, 31 Mar. 1862
  3. Mil. Des. from India, No. 88 of 1865  
Mil. Des. from India, No. 183 of 1867
  4. Mil. Des. to India, No. 160, 22 June 1871.
  5. Mil. Des. to India, No. 3, 18 Jan. 1866.

were placed for supply of the weapons with the leading manufacturers, Armstrong and Whitworth, in England.<sup>1</sup>

But the Indian Government was fully alive to the dangers implicit in its position of dependence for essential weapons and stores upon their distant source in England. Hence the principle of self-sufficiency for India was repeatedly asserted by the successive Viceroys and, though gradually, some important items came to be manufactured in India.

There was already a gun-carriage factory at Fatehgarh. In 1868 the Secretary of State sanctioned the establishment of a cartridge factory at Dum Dum, with a European establishment of a Chief Mechanical Engineer, two Assistant Mechanical Engineers, and two Turners and Fitters.<sup>2</sup> This manufacturing depot at Dum Dum was turning out in 1868-69 the muzzle howitzer or mortar; caps percussion; cartridges, balled, musket; cases for friction tubes, Boxer's Fuzes, wheel-barrows, etc.<sup>3</sup> The gun-powder produced in Madras was examined in England and compared with that manufactured at Waltham Abbey.<sup>4</sup> The foundry at Cossipore was maintained for the manufacture of ammunition, and for such repairs of the new guns as could be executed with the existing machinery. The foundry, it was found, could not turn out guns of larger size than the 25-pounder.<sup>5</sup>

Among other measures taken with a view to making India independent of England in regard to ordnance stores, small arms factories were established at Dum Dum in Bengal and at Kirkee in the Bombay Presidency; and the Harness and Saddlery Depot at Kanpur was developed into a manufacturing agency "of great usefulness and importance."<sup>6</sup>

1. For example the Bhutan war of 1864 involved mountain warfare and the Government of India urgently needed some rifled ordnance capable of being carried by mules, and desired that the gun, pack saddle and gear together should not weigh more than 180 or at most 200 pounds. The Government of India asked for such guns, with full complement of ammunition and special stores for them. But owing to the default of the contractors who had undertaken to supply the steel blocks for the guns, steel guns could not be prepared for transmission to India in time for service. Hence six brass 3-pounder guns were ordered with the necessary supply of projectiles and stores.

—Mil. Des. from India, No. 152 of 1865

Mil. Des. to India, No. 292, 30 Sept. 1865

2. Mil. Des. from India, No. 524 of 1865

Mil. Des. to India, No. 69 of 1866 and 287 of 1866, para 16.

3. Mil. Des. from India, No. 329 of 1869

M.D. Progs, Aug. 1869, Nos. 587-89

4. Mil. Des. from India, No. 158, 17 June 1867

Mil. Des. to India, No. 251, 31 Aug. 1867

5. Mil. Des. from India, No. 157, 21 July 1873

Mil. Des. to India, No. 244, 27 Nov. 1873

M.D. Progs, Feb. 1873, Nos 598-605.

6. Mil. Des. from India, No. 133, 23 June 1873, para 3.



## REDUCTIONS IN THE ORDNANCE DEPARTMENT

In 1869-70 Government of India was under financial pressure. So in 1870 steps were taken to reduce expenditure in the Ordnance Department. It was decided to concentrate all ordnance stores in the Bengal Presidency in the arsenals and to abolish certain magazines and establish in their stead depots of ammunition. The relative figures of arsenals, magazines and depots as fixed upon in 1861<sup>1</sup> and after the reductions made in 1870 are shown below<sup>2</sup> :—

1862	1870
<b>Arsenals</b>	<b>Arsenals</b>
Fort William	Fort William
Allahabad	Allahabad
Ferozepore	Ferozepore
	Rawalpindi
<b>Magazines</b>	<b>Depots of Ammunition</b>
Agra	Agra
Saugor	Bareilly
Peshawar	Saugor
Dera Ismail Khan	Multan
Multan	Dera Ismail Khan
<b>Depots</b>	<b>Manufacturing Depots</b>
Delhi	Kanpur
Dum Dum	Dum Dum
Dinapur	
Kanpur	
Lucknow	
Bareilly	

## AMALGAMATION OF ORDNANCE DEPARTMENTS

In 1878 the question of the reform of the Ordnance Department came under review of the Army Commission appointed that year. The greatest change, of course, that it recommended, consistently with its larger

1. GGO No. 724 of 1861.

2. Mil. Des. from India, No. 108, 6 April 1870

recommendation of the unification of the Presidency armies, was the amalgamation of the three Ordnance Departments into a single body.<sup>1</sup>

The recommendation of the Eden Commission involved consolidation of army departments. The change was demanded by the altered condition of the country. The Government of India had already, since 1864, instituted centralisation of control over the expenditure of the Ordnance as of other departments of the State.<sup>2</sup> Moreover the railways had been opened and extended and telegraphic communication established throughout the length and breadth of the land.<sup>3</sup> On top of this was the serious financial crisis of 1878. All these pointed to the need for reorganising the Ordnance Departments in India.

In practice, too, the maintenance of separate Ordnance Departments for Madras and Bombay had become ridiculous. For the "numberless questions affecting the Ordnance Departments of Madras and Bombay which in former days would have been decided by the Local Governments are now referred to the Government of India and are not permitted to be decided without its approval and sanction."<sup>4</sup> There was no proper supreme departmental authority on ordnance subjects in India. But, in effect, the Government of India decided all such subjects in consultation with the Inspector General of Ordnance, Bengal. Yet, ironically enough, that officer, though placed in the invidious position of a judge on the official actions and professional opinions of officers equal in status to himself, was no better than them in standing.<sup>5</sup>

The difficulties faced in the Afghan War (1878-80) also gave impetus to the demand for change. Among the arrangements that had to be

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1. In the special case of this Department, it was not for the first time that such a proposal had been made. The measure had been pressed again and again since 1869. Maj. Gen. Broome, who was then the Controller General of Military Expenditure, proposed the amalgamation of the Indian Ordnance Departments. After much consideration and discussion the measure was recommended to the Secretary of State by Lord Northbrook's Government in 1873. Lord Salisbury asked for a scale of the revised establishments proposed for the amalgamated departments. But this led to a series of enquiries which brought to surface several other matters concerning simplification and uniformity of procedure in the different ordnance establishments, which had to be given precedence to the wider question of amalgamation of Ordnance Depots. Finally in 1877 a special committee was appointed to frame recommendations for giving effect to the various proposals made by the Commission of 1874, and in 1879 the difficulties of maintaining three separate ordnance departments having no central controlling authority were represented to the Secretary of State.

Mil. Des. from India, No. 170, 14 Aug. 1873.

Mil. Des. to India, No. 218, 16 Nov. 1873.

2. Eden Commission Report, Parl. P. (Commons), 17, 1884-85, para 441

3. Ibid.

4. Ibid. para 442.

5. Ibid.

adopted to meet the situation arising from this war, certain steps had to be taken which virtually amounted, though only for the time, to the demolition of the Presidential system. Since the north-west frontier came under the sphere of Bombay, demands were naturally made upon its ordnance establishments, though the overall control had necessarily to be that of the Government of India.<sup>1</sup>

Ripon was convinced of the anomalies which the existence of three separate ordnance establishments in India involved. So he wrote to the Secretary of State in 1881 that "unity of administration was necessary for proper financial control over large supplies of war material which come to, or are manufactured in, the country; that economy is to be effected in demands made on England only by dealing with the demands of the army as a whole; and that in this way only would it be practicable to carry out reductions in certain redundant ordnance establishments, and to prevent excess in accumulation in one Presidency of stores required in another."<sup>2</sup> He therefore recommended the appointment of a Director General for the whole of India.

The Secretary of State's ready acceptance of this proposal is surprising. Almost in every other case he had asked the Government of India to submit modified proposals, not based upon the Indian Proposals for four commands, but fitting into the pattern of the Presidential organisation. But in this case, obviously in view of the unrivalled importance of this department, he found it expedient to authorise the consolidation of the three separate ordnance establishments in India into one department under a Director General of Ordnance, subordinate only to Government of India.<sup>3</sup> Coming next to the consolidation of the Military Accounts Department, this paved the way for the reorganisation of the Commissariat Department on an all India basis, which ranked only next in importance to the Ordnance Department.

Not only did the Secretary of State sanction this measure but he also gave his assent to what amounted to a virtual admission of the four command principle, though limited to the case of this department alone, by agreeing for the first time to the breaking up of the administration of

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1. Mil. Des. from India, No. 421, 5 Dec. 1879

2. Mil. Des. from India, No. 293, 5 Aug. 1881, para 11

3. Mil. Des. to India, No. 337, 10 Nov. 1883

the Bengal Ordnance Department into two circles.<sup>1</sup> However, the Government of India, while giving effect to the Secretary of State's sanction to the amalgamation of the department and the appointment of a Director General, did not carry out the division of the Bengal Circle into two.<sup>2</sup> It seems it was reluctant to disturb the departmental arrangements further than was absolutely necessary at a time when a fundamental change of organisation was being made. This decision of the Government of India, though seemingly absurd in view of its insistence on the creation of four commands, was indeed justified. For besides disturbing smooth administration it would have caused extra expense in office establishments, and accommodation, apart from other contingent expenses. Moreover Baluchistan and Burma had not yet been added to the British dominion in India and the work-load also, at the moment, does not seem to have justified that change.

### REORGANISATION AFTER AMALGAMATION

#### ADMINISTRATIVE STAFF

As a result of the reorganisation made in 1884 the staff of the department was clearly divided into Administrative and Executive branches. The administrative branch was responsible for the duties of general supervision and control of expenditure.<sup>3</sup> The executive branch controlled the manufacture, receipt, storage and supply of ordnance stores.<sup>4</sup> The administrative head of the amalgamated department, as already stated, was the Director General of Ordnance. He was the adviser of Government on all ordnance matters. He was responsible to the Government of India for the efficiency of the economical working of his department.<sup>5</sup> The Director General was to be assisted by two officers, a Deputy and an Assistant Director General, the first being the senior of the two.<sup>6</sup>

It had been proposed by the Commission of 1879 that the Director General should also be the direct head of the manufacturing establishments.<sup>7</sup>

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1. Ibid.

2. Mil. Des. from India, No. 31, 26 Feb. 1884, para 3.

3. Eden Commission Report : Parl. P. (Commons), 17, 1884-85 para 443.

4. Ibid.

5. Mil. Des. to India, No. 337, 8 Nov. 1883  
IAC Cl. 5, 31 Jan. 1884

6. Mil. Des. from India, No. 31, 26 Feb. 1884, para 5

7. Eden Commission Report : Parl. P. (Commons), 17, 1884-85, para 445.



This principle was accepted. But lest there should be too much of concentration of authority in the hands of this officer, and thus the organisation might become overcentralised, the consolidated ordnance department for all India was divided into three circles of superintendence and supply, i.e. Bengal, Madras and Bombay, each under the charge of an Inspector General of Ordnance.<sup>1</sup> These officers were put under the immediate orders of the Director General and were required to assist him in carrying out the administrative work of arsenals and depots. They were to ensure that the several arsenals and depots in their respective circles of supply were in an efficient state and that the officers under their command performed their duties correctly. They were to arrange for the execution of the orders of the Director General as to the transfer of stores from one arsenal or depot to another, and for the disposal of unserviceable stores. Each of them was to have charge of the ordnance establishments in the army to which he might be attached.<sup>2</sup>

Since these duties in Bengal were heavy and beyond the physical capacity of one man, the Inspector General there was provided with an assistant. This constituted the supervising staff of the Ordnance Departments.<sup>3</sup>

The total administrative establishment as now sanctioned was thus as follows<sup>4</sup> :—

- 1 Director General of Ordnance
- 3 Inspectors General of Ordnance
- 1 Deputy Director General of Ordnance
- 1 Deputy Inspector General of Ordnance
- 1 Assistant to the Director General of Ordnance.

#### EXECUTIVE STAFF

The executive branch of the Ordnance Department was, so to speak, subdivided into what may be termed, the manufacturing and supply departments. The duties of the manufacturing establishments and the establishments of supply were manifold. They comprised the manufacture,

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1. IAC Cl. 5, 31 Jan. 1884.  
2. Mil. Des. to India, No. 337, 8 Nov. 1883  
3. Mil. Des. from India, No. 31, 26 Feb. 1884, para 4.  
4. Ibid.



purchase, storage, receipt and issue of the munitions of war and the various articles provided through the agency of the Ordnance Department for the use of the army in India. A large portion of the munitions of war for India was manufactured in the country, so factories were maintained at certain stations. The prompt and sufficient supply of all stores required for the troops dependent on it was the first and most important duty of an executive officer.<sup>1</sup>

#### DEVELOPMENT OF MANUFACTURING ESTABLISHMENTS

In 1866 the Secretary of State had pronounced that "it is highly expedient that India should be made self-reliant, as far as possible, and that it is not desirable that she should be dependent on this country for articles (such as gun-powder, gun-carriages, limbers, and waggons, repairs to guns themselves, and their equipments, harness, saddlery, and many minor articles) which can be procured of good quality in India."<sup>2</sup> Consistently with this principle the number of factories was increased and in 1878 we find that there were 10 factories in India and one manufacturing depot. They included :<sup>3</sup>

- 3 Gun-powder Factories
- 3 Gun Carriage Factories
- 2 Small Arms Ammunition Factories
- 1 Foundry and Shell Factory
- 1 Harness and Saddlery Factory
- 1 Small Manufacturing Depot at St. Thomas Mount.

Of the ten factories, five were located in the Bengal Presidency, two in Madras, and three in Bombay. They were entirely under the control of the Inspectors General of Ordnance, Bengal, Madras and Bombay respectively. One Superintendent was in charge of each factory, who was responsible to his Inspector General for the efficiency of his establishment, the correctness of the work executed, and the economy exercised in manufacture. Three Assistant Superintendents were allowed for the five factories in Bengal, one for the two factories in Madras, and one for the three in Bombay.<sup>4</sup> These officers were moved from one factory to another as the Inspectors General of Ordnance might consider desirable.<sup>5</sup>

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1. Eden Commission Report : Parl. Commons., 17, 1884-85, para 458.

2. Mil. Des. to India, No. 3, 8 Jan. 1866

3. Eden Commission Report : Parl. P. (Commons), 17, 1884-85, para 459.

4. Ibid, paras 459 & 460.

5. Ibid, para 462.

## ARSENALS AND DEPOTS

The following were the arsenals and depots now maintained in India<sup>1</sup> :—

	<i>Arsenals</i>		<i>Depots</i>
	<i>1st Class</i>	<i>2nd Class</i>	
Bengal	3	1	4
Madras	1	2	5
Bombay	1	3	4

The arsenals were under the Commissaries of Ordnance and ammunition depots were under the charge of senior warrant officers.

The executive staff now sanctioned for this establishment was distributed as follows<sup>2</sup> :—

	Commissaries 1st Class	Commissaries 2nd Class	Commissaries 3rd Class	Commissaries 4th Class
1st Class arsenals, Calcutta, Allahabad, Ferozepore, Madras and Bombay	5	—	5	—
2nd Class arsenals, Rawalpindi, Rangoon, Secunderabad, Karachi Mhow and Aden	—	6	—	—
1st Class Depots Agra, Quetta, Poona, and St. Thomas' Mount	—	—	—	4
Assistant to the Inspector General of Ordnance.	—	3	—	—
Total	5	9	5	4

1. Ibid, para 462.

2. Mil. Des. to India No. 130, 8 May 1884.  
Mil. Des. from India, No. 31, 26 Feb. 1884, para 8.  
IAC Cl. 5, 31 Jan. 1884 : cf. GO No. 342 of 1074; see also  
Mil. Des. from India, No. 293, 5 Aug. 1881  
Mil. Des. from India, No. 31, 26 Feb. 1881, para 10  
Eden Commission Report Parl. P. (Common), 17, 1884-85, paras 464 and 465.

The annexation of Burma necessitated an increase of an additional 4th Class Commissary of Ordnance for Rangoon. The establishment of the Ordnance Department in Burma in 1889 consisted of a 2nd Class arsenal at Rangoon, a second class depot at Mandalay, and a temporary depot at Bhamo. An arsenal had already been established at Quetta in consequence of the acquisition of Baluchistan. Moreover Quetta was now being supplied with armaments and stores for the defensive works in that part of the frontier, and in 1887 there was a Commissary posted there too. Thus the number of Commissaries in 1887 was 25.<sup>1</sup>

The number of Assistant Superintendents of factories had in the meanwhile been raised from three to six. In 1892 it was decided to increase their number from six to nine.<sup>2</sup> The six Superintendents so far available were distributed as follows<sup>3</sup> :—

Small Arms Ammunition Factory, Dum Dum	1
Small Arms Ammunition Factory, Kirkee	1
Harness and Saddlery Factory, Kanpur	1
Foundry and Shell Factory, Cossipore	1
Gun Carriage Factory, Fatehgarh	1
Gun Carriage Factory, Bombay	1

The three factories, named below, which were without an Assistant Superintendent, were also now provided with one each<sup>4</sup> :—

Gun-powder Factory, Ishapur  
 Gun-powder Factory, Kirkee  
 Gun Carriage Factory, Madras

This decision was taken because it was realised that the maintenance of proper supervision led to greater economy in manufacture. Besides, the Ishapur Factory was now being geared to manufacture prism powders and powder for. 303 rifle, and at Kirkee it was under contemplation to erect experimental plants for the manufacture of cordite, gun cotton and nitro glycerine.<sup>5</sup>

1. Des. Fin. & Commerce, No. 221, 27 Aug. 1887  
 Mil. Des. to India, No. 286, 3 Nov. 1887

2. Mil. Des. from India, No. 77, 7 June 1892  
 Mil. Des. to India, No. 112, 18 Aug. 1892

3. Ibid.

4. Ibid.

5. Ibid, para 2.

Some other significant developments in ordnance had occurred, too, which might well be noticed here. The introduction of breech-loading rifles had necessitated the employment of civil armourers for their repair. In 1885 it had been decided to supply to India the Gatling, Hotchkiss and Gardner machine guns.<sup>1</sup> The introduction of machine guns and magazine arms rendered it more than ever necessary that armourers should be carefully trained and competent workmen. Hence it was decided that armourers would not be trained in India any more and would be sent to England for training.<sup>2</sup>

At this time the European nations were arming themselves with a new magazine rifle of small calibre and smokeless powder, which it was assumed would afford considerable advantages on the forces possessing it. England had already adopted cordite. It had established itself as a powder for the magazine rifle, and was giving very good results with quick-firing and field guns. The introduction of an experimental plant at Kirkee for the manufacture of cordite was a great step forward in the direction of keeping India abreast of other advanced countries of the time. In consequence of the introduction of cordite, the gun-powder factory at Madras was abolished in 1895. Also a Proof Department was established at Balasore, in order to carry out the proof of projectiles manufactured at the Foundry and shell Factory, Cossipore. It obviated the necessity for sending projectiles manufactured in India to England for proof.<sup>3</sup>

#### MANUFACTURE OF STEEL IN INDIA

The general introduction of breech-loading ordnance in India had necessitated the provision of steel projectiles. Hitherto the Government of India had maintained a factory at Cossipore for the production of cast-iron shells in use with rifled muzzle-loading guns.<sup>4</sup> In view of the changed political aspect after 1885 it was only reasonable that India should not be

1. Mil. Des. from India, No. 154 of 1885  
Mil. Des. to India, No. 168 of 1885, para 19

2. The establishment of armourer sergeants in 1899 was 13 men, with a reserve of seven.

Mil. Des. to India, No. 269, 6 Dec. 1888  
Mil. Des. from India, No. 123, 20 July 1888  
Mil. Des. from India, No. 64 of 1889; see also  
Mil. Des. from India, No. 108 of 1888  
Mil. Des. from India, No. 199, 29 Dec. 1885  
Mil. Des. to India, No. 36 of 1888

3. Summary of Measures considered or carried out in the Military Department of the Government of India, during the Viceroyalty of the Earl of Elgin and Kincardine, Jan. 1894 to Dec. 1898.

4. Mil. Des. from India, No. 31, 25 Feb. 1891  
Mil. Des. to India, No. 70, 14 May 1891.

dependent on England for the supply of ammunition for its coast defence and artillery. Apart from this consideration, steel entered very largely into the construction of carriages for field artillery and of all mountings for heavy guns. Accordingly in June 1892 a steel furnace commenced work in the Cossipore Foundry and Shell Factory.<sup>1</sup>

#### APPOINTMENT OF INSPECTORS OF ORDNANCE MACHINERY

The need for high class artificers capable of rendering necessary skilled assistance in the working of hydro-pneumatic mountings led to the creation of a new class of appointments, viz., Inspectors General of Ordnance Machinery. Trouble had already been experienced with the 6-inch B.L. mountings of Aden. But since there were then 16 Inspectors of Ordnance Machinery of the War Office, the Secretary of State for War agreed to the employment in India of five such officers.<sup>2</sup>

#### DIVISION OF BENGAL CIRCLE

It would be recalled that the scheme for the abolition of the Presidency army system, was submitted by the Government of India in 1881, included the division of the Ordnance Department in the Bengal Presidency into two circles.<sup>3</sup> The Earl of Kimberley sanctioned in 1883 the amalgamation of the Ordnance Department into one department under a Director General, organised in four circles, each under an Inspector General.<sup>4</sup> The Government of India, however, while giving effect to this sanction, so far as the amalgamation of the department and the appointment of a Director General was concerned, did not carry out the division of the Bengal circle into two.<sup>5</sup> But time proved this organisation to be defective. The undivided Bengal circle formed a larger charge than the other two taken together.<sup>6</sup>

Moreover, the army had since been increased, a large system of defences had been created, stores were far more numerous in pattern than formerly, war material had become complicated, and the business of the various ordnance factories had largely developed. Consequently the Bengal circle which embraced all the ordnance establishments and the supply

1. Ibid.

2. Mil. Des. to India, No. 162, 15 Dec. 1892.

3. Mil. Des. from India, No. 293, 5 Aug. 1881

4. Mil. Des. to India, No. 337, 8 Nov. 1883

5. Mil. Des. from India, No. 31, 36 Feb. 1884

6. Mil. Des. from India, No. 237, 17 Feb. 1889, para 2



of the troops in the Bengal Presidency was now too extensive to be satisfactorily controlled by one officer with headquarters at Calcutta.<sup>1</sup> The division was desirable for departmental administration, because the Bengal Circle was unwieldy in size, and also because it did not fit conveniently with the division of the Bengal department of Military Accounts into two circles, which had been lately carried out.<sup>2</sup> The Inspector General of Ordnance, Bengal had now to deal with two Controllers. The force of these arguments was recognised and the measure received the assent of the Secretary of State in 1890.<sup>3</sup> With the division of the Bengal Ordnance Circle into two, all the departments of the Bengal army, except the Clothing Department, were constituted into two separate circles.

Thus the whole Ordnance Department was divided into four circles which corresponded with the commands formed on the abolition of the 'presidential armies' on 1 April 1895.<sup>4</sup> Each circle was, as before, under an Inspector General of Ordnance, who was henceforth to be on the departmental staff of the Lieut-General commanding and was to be his adviser on all matters connected with the equipment of the forces under his Command.

The several circles, as also their arsenals, depots and factories, as they stood in 1894 were as follows<sup>5</sup> :—

	<i>Arsenals</i>	<i>Depots</i>	<i>Factories</i>
Punjab	Ferozepore Rawalpindi	— —	— —
Bengal	Fort William Allahabad	— Agra	Small Arms Am- munition Dum Dum; Gunpowder, Ishapur; Gun Carriage, Fateh- garh; Foundry & Shell Factory Cossipore; Harness & Saddlery, Kanpur

1. Mil. Des. from India, No. 237, 17 Dec. 1889

2. Note 11 Sept. 1889 : M.D. Progs, A. Jan. 1890, Nos. 2401-20

3. Mil. Des. to India, No. 48, 27 Feb. 1890

These two circles comprised the following ordnance establishment :—

*Eastern Circle*  
Fort William Arsenal  
Allahabad Arsenal  
Agra Depot

*Western Circle*  
Ferozepore Arsenal  
Rawalpindi Arsenal  
Quetta Arsenal

4. GGO No. 981, 26 Oct. 1894

5. Sp. IAC, 26 Oct. 1894.

Madras	Madras	Fort Dufferin	—
	Rangoon	—	Gun carriage, Madras
	Bellary	Trimulgherry	—
Bombay	Bombay	Poona	Small Arms Ammu- nition Kirkee
	Quetta	Dera Ismail	
		Khan	—
	Karachi	Ahme- dabad	Gunpowder, Kirkee Gun Carriage, Bombay
	Aden	—	
	Mhow	Mhow	—

*Other Reforms*

The decade from 1892 to 1902 also saw the extension of the operations of the Ordnance Department. In 1898 the factories were placed under the direct control of the Director General of Ordnance, with a view to increase efficiency and control manufacture. In the same year it was decided to establish a central gun-carriage factory at Jubbulpore in place of the three factories then existing at Fatehgarh, Madras and Bombay. The new factory, however, had not been built before the end of the decade. As it had been found by experience that a supply of rifles from England took time and was also not economical, it was decided to make India self-supporting in this sphere also. So it was decided towards the end of the decade to set up a rifle factory at Ishapore in the Madras Command. The establishment of a cordite factory was also decided upon in pursuance of the same objective, and at the end of the decade a factory was being established at Wellington in the Nilgiri hills. Of a piece with these measures was the decision taken in 1900 to fill lyddite shell in India and to utilize for this purpose a branch of the Kirkee Small Arms Ammunition Factory.<sup>1</sup>

1. Statement Exhibiting the Moral & Material Progress & Condition of India 1901-02, p. 292.

# BIHAR LIGHT HORSE

P C ROY CHAUDHARY

A FAREWELL dinner and dance at Muzaffarpur in Bihar on November 15, 1947 marked the fading away of Bihar Light Horse, the most senior and oldest Volunteer Cavalry Unit in India. Major-General H.H. Stable, C.B., C.I.E., Area Commander, was present on the occasion.

As India became a new Dominion from August 15, 1947, the Auxiliary Forces had to cease from the midnight of August 14.

The Regiment was originally formed as a Volunteer Corps in 1862 and comprised chiefly European and Anglo-Indian planters. The need for a Volunteer Force of this type which could be the second line of defence had been felt by the British administration as early as 1857 when the 'Sepoy Mutiny' had broken out, Mr. Latour, the Collector of Tirhut District in Bihar, called the European Planters into Muzaffarpur when the Indian Regiments had gone into mutiny. A small defence party was hastily organised with a strength of over 50 and this was, in a way, the beginning of Bihar Light Horse.

The credit of founding the Regiment goes to Mr. Collingridge of Daudpur Indigo Factory near Muzaffarpur. A Mounted Volunteer Corps was raised on July 16, 1862 under the name of Subah Behar Mounted Rifles. This was sanctioned by Government and the Volunteer Corps continued under the same name till 1884 when the name was changed to Bihar Light Horse. As North Bihar had an European indigo plantation every 15 square miles, there was no dearth of European and Anglo-Indian personnel for the unit.

Branches were formed in Arrah and other towns in South Bihar also. A regular annual camp used to be held. Parade grounds were acquired in different places in Bihar and practically all the European officials and European and Anglo-Indian planters were members of the Corps. The Corps used to be inspected by the superior military officers. The regiment had taken part in the Proclamation Parade in Calcutta on January 1, 1884. Occasionally the help of the Corps used to be taken by the civil authority. In 1899 the services of a half squadron were accepted for active service in South Africa. These men joined Lumsden's Horse on its formation. Unfortunately, this section of Lumsden's Horse consisting of Bihar Light

Horse-men was detailed out to hold a kopie and when it came to their turn to retire, they had to do so across the open under heavy fire at close range. Some were killed and wounded and some were missing. The coolness and skill of the troopers was highly commended in a Regimental Order. Honours and distinctions were earned by some of the persons of this section of Bihar Light Horse and some members received Commissions in the Army.

A mural tablet, in memory of the members of Lumsden's Horse who fell in battle, has been erected in St. Poul's Cathedral, Calcutta, and one in Christ Church, Muzaffarpur, in memory of the members of Bihar Light Horse by their former comrades in the regiment. In several outbreaks of famines and floods members of the unit did good work to help the civil administration.

In 1921 when the Prince of Wales came to Bankipur, Bihar Light Horse formed the escort. Owing to the political agitation and boycott, the situation was delicate but the members of the Force conducted themselves creditably. In the great Bihar Earthquake in 1934 the members of the Corps went into active assistance to the distressed people. When World War II was declared, many of the members entered the regular forces and the membership was much reduced. In 1942 when the Civil Disobedience Movement spread like wild fire, Bihar Light Horse, along with other Auxiliary Forces, was embodied and called out to aid the civil administration. Some of the members of Bihar Light Horse rescued many of the ambushed persons and tried to help restore normal conditions. Road communications having completely broken down, the intimate local knowledge of the members was fully utilised by the military. From August 10 to October, 10, 1942, Bihar Light Horse remained embodied. In August 1946, when there was a communal outburst, the Monghyr troops were embodied and called out to help the civil administration.

The year 1947 saw the exit of Bihar Light Horse because the A.F.I. ceased to exist from August 14 midnight, as there was no place for it in the new Dominion. Thus this force faded away after a chequered career from 1862. Though now such an auxiliary force consisting of only Europeans and Anglo-Indians in India might appear an anachronism, credit must be given to the members for doing voluntary service to help the Administration. The writer was present at the function of November 15, 1947 that marked the fading away of the unit. Some of the old members sobbed.

## BOOK REVIEWS

MEN OF INTELLIGENCE

by KENNETH STRONG

(Published by Cassell, London, 1970) pp, 183, Price Rs. 50s.

THE author is a well-known professional intelligence man, and hence his book will be read with great interest by people interested in intelligence. In this book he has discussed the role of intelligence Chiefs like Col. Hentsch, the German intelligence chief on the staff of Gen. Von Moltke, who was "almost by accident partly responsible for the eventual defeat of Germany in World War I", Col. Walther Nicolai, the chief of the German Secret Service throughout the first World War, General Charteris of the British Military intelligence, attached to General Sir Douglas Haig, General Gauche and General Didelet of the French Intelligence, Col. Ulrich Liss and General Kurt Von Tippelskirch, Admiral Canaris, and General Gehlen of Germany after the great war and during the Second World War, Cavendish-Bentinck, the head of the British intelligence during the Second World War, and Allen Dulles and John A. McCone of the American C.I.A. The author has traced the development of the intelligence role in the major countries like Germany, France, England, Russia and U.S.A. during the last 50 years of war and peace—how the earlier role of dependence on secret agents yielded place to the collection-collation-evaluation system of the modern 'intelligence.' This he has done against the background of historical events and personal anecdotes, related in an interesting manner.

But, the book contains more than what its title signifies. For example, the last chapter on 'What is Intelligence?' appears to be the most important part of the book giving in nutshell the considered views of the author on intelligence and how it should be employed most fruitfully towards the achievement of national security. He has rightly said that "the intelligence machine collects, collates, and evaluates information and interprets it to provide both 'facts' and 'forecasts'. In a country like India where intelligence efforts are directed by "everything-knowing" bureaucrats and less than knowledgeable police or military officers, and not by the really competent professionals like historians, sociologists, economists, etc., the author's following remarks need to be quoted: "It is important that those who direct the Intelligence effort in senior positions should be independent of any department and have a broad knowledge of affairs if judgement is to be objective, and affected neither consciously or unconsciously by the wish to see some particular policy followed..... However knowledgeable service officers may be in military matters, the core of any national Intelligence community, even in the military sub-divisions, must be primarily civilian, for only by employing civilians as career Intelligence officers can long-term continuity and professionalism be established. In a modern Intelligence structure there is a requirement for specialized expertise in areas of economics, sociology, science and technology which can only be met by the employment of civilians on a fully professional basis."



General Sir Kenneth is a great advocate of centralization of intelligence activities and agencies. The author has dispelled many popular but erroneous notions about certain recent intelligence activities. For instance, he has argued with the help of facts and figures that neither the U2 incident nor the Bay of Pigs fiasco was necessarily due to CIA errors. The book contains a good bibliography. Like his previous work "Intelligence at the top" this publication will also be acclaimed as another addition to the number of classics in its field, and a significant contribution to military history.

—B.C.

#### GUERRILLAS IN HISTORY

by LEWIS H. GANN

(Published by Hoover Institution Press California 1971) pp 99 Price \$ 3.95

THIS book is a revised and widely expanded version of a short paper entitled "Guerrillas and Insurgency", published in March 1966, in the *Military Review*. Although it is too small a treatise to be an exhaustive treatment of the subject, "for a full account would fill many volumes and would cover the history of the whole world", it is nevertheless packed with very useful results of painstaking research into the activities and 'modus operandi' of the different guerrilla groups throughout history. Although guerrilla warfare has, of late, attracted much attention and created unprecedented interest amongst the younger generations, according to the author it is neither new nor romantic as it is usually thought to be. Mr. L.H. Gann, a Senior Fellow of the famous Hoover Institution, has not only dealt with the guerrillas in successive historical periods, operating in different countries (e.g. partisan warfare in the pre-industrial age, partisan warfare during the industrial revolution and the heyday of imperialism, partisan warfare in the first third of the twentieth century, and partisan warfare since the start of the Second World War), but has also dwelt upon the place of partisan warfare in history in the last chapter of his book, and discussed the various theories and concepts about the guerrillas pretty lucidly and objectively. Moreover, the author has not overlooked the weaknesses of the guerrillas and the methods and potentialities of the counter-guerrillas.

While Clausewitz defined war as the continuation of State policy by other means (Lenin interpreted it as revolution by other means), the other means must necessarily include guerrilla action also. Hence in the present times, especially in an age of mutual nuclear deterrence, guerrilla tactics as a subject has assumed great importance not only to the guerrillas themselves, but also to the conventional soldier who has to be alert to, and capable of meeting, any guerrilla threat.

Although, while going through the book the reader will naturally feel the need for some more information on, and analysis of, the recent guerrilla wars, e.g. the partisans' role in great Patriotic War in Russia,

the long struggle of the Maoist communists, the Pathet Lao activities, and the Vietnam War, the brevity of the book will be put forward as the scapegoat. But it cannot be gainsaid that the size of the treatise is inadequate for the subject matter.

The writer's conclusion: 'Military planners in the past have often made the mistake of underestimating the guerrilla. The danger now exists that the pendulum may swing too far the other way, and that partisan warfare will be overrated and come to be looked upon as a military panacea. Truth, however, lies with neither extreme: "revolutionary wars" fought by guerrilla actions still remain only one of many forms of human conflict.'—appears to be correct.

The publication will be found very interesting and educative by all—scholars, soldiers, guerrillas and the general reader. It contains a selected bibliography also.

— B.C.

#### A GUIDE TO AIR POWER IN ASIA AND THE PACIFIC

by PUSHPINDER SINGH

(Published by Guide publication, New Delhi 1971) pp 200 Price Rs. 18.00

**T**HE book contains information about the Air Forces of 39 countries of the world. Besides giving the strength, both of aircrafts and personnel, an effort has been made to give the set up of the Air Force of each country.

The author must have had to put in a lot of hard work to compile this book, but the purpose is not very clear.

If it is intended to give the strength of the Air Force of each country, it lacks the lasting value, since strength keeps changing. Moreover latest information in this respect is readily available in publications like, "The Military Balance", published by the Institute of Strategic Studies, London. If it is intended to give the set up of each Air Force, that too is neither comprehensive nor very authentic and uptodate. It is possible, by the time the book was published, the information had already become out of date. For obvious reasons, it also cannot be classified as a reference book.

At best, it can be termed as an attempt to give a "bird eye-view" of the Air Forces of 39 countries, as in 1970. Then the question arises, is it worth all the effort and labour and can such a book have a sale to justify its publication?

Aircraft Tables, listing some 170 aircrafts in the last 50 pages of the book contains some useful information.

The author's latest article, "The Flying Guerrilla—Israel's Air Arm" published in *The Illustrated Weekly of India*, dated 23rd July, 1972, is more indicative of his grasp and ability rather than the book under review.

M.S.

ARCHITECT OF AIR POWER : THE LIFE OF THE FIRST VISCOUNT WEIR OF EASTWOOD 1877-1959

by W. J. READER

(Published by Collins, London 1968) pp. 351 Price Rs. 50s.

A VERY interesting book which holds your attention throughout.

Of all the decades in History, the 1920's and the 1930's are perhaps the most interesting, the most pregnant and the most significant. Certainly, few other decades could have seen such startling processes of change being set in motion in such bewildering variety of human occupations as did the 20's and 30's and that too all over the world. However, few noticed this.

This period saw the rise to heights of authority for good or for ill. In the economic world it was a period of 'agonising reappraisal'; of change from the old to the new ; from free and unadulterated private enterprise to social control through public enterprises. In the political world, to the rise of individual regimes and national socialism, in the most blatant and aggressive form as against democratic socialism; of peace and non-violence as against unashamed and unapologetic violence of the crudest and most debased kind.

What a ferment the world was in ? India produced a Gandhi at the same time Germany produced a Hitler. Can there be a greater contrast ?

In India, Britain and America, the decadence resulting from long decades of servility on the one hand and of prosperity on the other followed by a World War, which sapped the last lingering energy of a whole race and three generations of peoples, had set in. But soon, in India and in America, a change was evidently due, and a virile, confident and energetic leadership under Mohandas Karamchand Gandhi and Franklin Delano Roosevelt was to take over and these two survived. It was not to be so in Britain until the Second World War had begun.

Changes were taking place in the social and economic worlds also. But these need not concern us here.

And yet Britain survived. As with India and the United States, so with Britain, these countries seem somehow to produce the right type of leadership at moments of crisis. Thanks to the ethos of the people and their latent strength a small group of dedicated and selfless individuals make themselves felt and their ideas accepted.

Liddel Hart was one such. From a reading of the book under review, 'Architect of Air Power' by W.J. Reader, it would appear that Viscount Weir was one other.

Here was an engineer and a businessman who had come up the hard way, but with none of the prejudices that such beginnings invariably encourage. He was broad-minded, very capable, with no personal motives or ambitions, no axe to grind, completely dedicated to the task in hand, with no thought of reward except in the satisfaction of a job well done.

That there are such individuals in various strata of society, becoming is increasingly clear as more and more biographies come to be written.

Undoubtedly, the first Viscount Weir belonged to this small band. He was sought after by the various Governments in Britain, Labour and Conservative, between 1918—towards the end of the First World War, when he became the Secretary of State for Air—and the beginning of the Second World War (which ended the two decades under review).

His interests and ability and the variety of his undertakings on behalf of the State were astonishing and were to bear rich fruit in later years. But the individuals concerned were not there to reap it nor perhaps did they care.

Viscount Weir was connected with the birth of the Royal Air Force and strangely the credit for being the 'Architect of Air Power' as the title of the book suggests, goes to him, and not as is commonly believed to Lord Drenchard. We may have our individual opinions on this. But certain chapters in the book clearly indicate where the credit rightly belongs. Be that as it may, all this makes for interesting reading.

Viscount Weir was also connected with the problems of the bomb versus battleship controversy, the various sub-committees of the Committee of Imperial Defence, on Housing, Sugar and Electricity matters, gearing the aircraft industry for war and so on. It is quite a fabulous list. And yet as the author states, "he was never paid for the work he did, so that his independence was unquestionable."

There perhaps was the crux of the matter—integrity. It was fortunate for Britain that at times of crisis during the two decades under discussion, she was served faithfully and unreservedly by individuals of unquestioned integrity and ability who could get things done.

Liddel Hart and Viscount Weir are the ones so far known. More to follow no doubt.

The book is well got up with an arresting flap. The print is easy on the eye and the style is breezy. The book was written at the instance of the son of Viscount Weir—which lends an appropriate and filial touch to the contents. The author is undoubtedly knowledgeable and has taken pains to marshal facts and write them down—a complicated task considering that Viscount Weir was at any one time handling no fewer than three major defence commitments including being Adviser to the Air Minister, which tasks over-lapped each other in time and functions. 'To get anything like a coherent narrative, however, it is necessary to disentangle them to an extent greater, probably, than they were even disentangled in Weir's own mind'!

The book throws a flood of light on Britain in the interwar years—a period which has fascinated the reviewer.

Perhaps, the photographs included in the book could have been based on a wider choice considering the period covered and the activities it relates to. The picture that emerges and persists is that of a remarkable man, detached, viewing problems in their wider perspective, fearless and unbiased, thinking solely of the nation's good and safety and not much concerned with either reward or remuneration. Fortunate is the country that is served by such men and women. These rustic and homely qualities still seem to count even in sophisticated Britain—perhaps by way of contrast and in contra-distinction to the prevailing mood.

A competent, well written and absorbing book which does credit to both the author and to his subject and wellworth reading.

D.A.K.

#### 1971 WAR IN PICTURES

by INDIA MINISTRY OF INFORMATION AND BROADCASTING

(Published by Publications Division, New Delhi) pp 104 Price Rs. 17.00

THIS handsomely produced volume presents through the medium of pictures the momentous events that shook the Indian sub-continent in 1971. It covers all the major developments of the year, viz. the genocide by the Pakistani army, the struggle of the Mukti Bahini, daily provocations and the attempted pre-emption in the west by Pakistan, operations in both the eastern and western theatres and finally the surrender by Pakistani forces in Dacca. The brilliant performance of all the three wings of our armed forces become alive in these handpicked pictures, mostly taken on the scenes of action.

Also available in Hindi, Bengali and Punjabi.



## 1857—A PICTORIAL PRESENTATION

by INDIA MINISTRY OF INFORMATION AND BROADCASTING

(Published by Publications Division, New Delhi) pp 88 Price Rs. 6.00

THE great uprising of 1857 was an important landmark in the history of India and marked the beginning of the country's struggle for freedom. This is a collection of rare and historical pictures and sketches which show the Indian soldiers of that era in action. With explanatory notes and an introduction giving the salient features of the events this album is of interest alike to the students of history and laymen.

## EIGHTEEN FIFTY-SEVEN

by SURENDRA NATH SEN

(Published by Publications Division, New Delhi) pp. 468 Price Rs. 5.50

THIS is a detailed account of the events before, during and after 1857 meant for those who are interested in the subject more deeply. Foreword is by the late Maulana Abul Kalam Azad—profusely illustrated.

## THE INDIAN ARMY

by DHARAM PAL

(Published by Publications Division, New Delhi) pp. 121 Price Rs. 3.00

THIS book is intended to stimulate the interest of the people of India in military matters and the defence of the country: and to provide a suitable text book for boys and girls receiving military training in the National Cadet Corps. The story of the Indian Army—its recruitment, training and organisation—has been told in a simple and easily intelligible manner.

## A MARITIME HISTORY OF INDIA

by COMMANDER K. SRIDHARAN

(Published by Publications Division, New Delhi) pp. 152 Price Rs. 3.00

THIS book relates the story of the development of India's maritime tradition from the ancient times to the present day. It also throws light on the role of the Indian Navy in the defence of the country. A book not to be missed by those in the maritime profession, it has ample interest also for the laymen. Foreword by Shri Y.B. Chavan. Profusely illustrated.

## THE COMMONWEALTH AT WORK

by DEREK, INGRAM

(Published by Pergamon Press, Oxford 1969) pp. 151 Price \$ 3.00

THIS is an excellent book, although a broad outline, on the present-day activities of the Commonwealth of Nations, which was formerly known as the British Commonwealth. The Commonwealth today has about 32 members with more than 800 million people, which is more than one-fourth of the total population of the world.

The author has set forth in this book a large mass of information about the working of the various bodies and agencies—the Commonwealth Secretariat, the Commonwealth Foundation, Commonwealth Education Conferences, COMEX, the Commonwealth Parliamentary Association, Commonwealth Finance Ministries' meetings, Commonwealth Development Corporation, Commonwealth Development Finance Company, Overseas Development Institute, etc. According to the author, the Commonwealth has built a lattice-work of cooperation and common approach, in various spheres, on a larger scale than the critics are willing to accept. Unlike the past, the Commonwealth today is not knit together with political control or constitutional ingenuity, but by freedom of association aimed at economic and cultural cooperation. It is neither a military block nor a political power group. In spite of a great divergence in language, culture, religion, race, economic development political structure, or social system, it has not been considered useless by its members, and that itself is a great achievement. Those who cherish the goal of one world-state, in which all groups of the mankind will live in peace and cooperation, despite hundreds of differences obtaining amongst them, the Commonwealth will remain as its beckon star and microcosm. Although there are big threats to the existence of this unique body in the form of differences of opinion centring round problems like racism in South Africa and Rhodesia, Britain's arms shipment to these racist countries, Britain's entry into the E.C.M., etc., which the author has, of course, not discussed, everybody will welcome this book as a mine of information about Commonwealth activities. The book contains a fine bibliography.

B.C.

## GANDHI THE WRITER

by BHABANI BHATTACHARYA

(Published by National Book Trust, New Delhi, 1969) pp 328 Price Rs. 15.00

SO much has been written by Gandhi himself. So much more has been written about him, and now the monumental 'Collected Works of Mahatma Gandhi' is under print.

Very little that is new can now be expected to be written about him. And yet this astonishing man continues to be the centre of

attraction and interest; his activities, his thoughts, his concepts, his writings.

Therefore, if any book written about him in the present decade is to hold the interest of the reader, it should provide among other things either a new slant, a new angle on his already well known thoughts and actions and thus inducing further thoughts in the reader or the authorship should be of such a class as to encourage the prospective reader to wish to know what this particular author has to say or write about Gandhi. In regard to Gandhi as a writer, Raj Kumari Amrit Kaur has this to say—“The care and thought he bestowed on whatever he himself wrote the eagle eye with which he vetted every word of what even a man like Mahadev Desai wrote; his insistence on right expression, on adherence to truth where facts are concerned, on the necessity of not using one word more than is necessary, his appreciation of a good literary style, his ruthless weeding out.....all these are never to be forgotten lessons”. There is a useful chapter on ‘Impact on Indian Literature’, Here the author expands on the theme that Mahatma Gandhi was a writer’s writer and goes on to explain that Gandhi was in the nature of a catalyst in that while producing no creative work himself, he inspired creativity on a scale surpassed by none.

Here of course, the author is wrong. Gandhi’s whole life as he lived it, his thoughts as he conceived them and wrote them down—and here one must add that his actions were largely or entirely based on instinct and it was only subsequently that he reasoned them out either in speech or in writing for the benefit of the multitudes—was the very essence of creativity. It is essential to explain this.

No one had lived like this on the world stage before. He had blown aside all previously and fondly held concepts and conventions and had suggested with the enormous force of his unique personality an alternative—at once frightening in its impact and so much of the earth, earthy. And this extended into the sphere of writing as well. If this is not creativity, one would like to know what is?

All these misunderstandings, misconceptions and incorrect impressions were part of the man and added to the attractiveness of the man as he lived his life and went about his daily work towards his goal. And what was his goal? Surely, in spite of vast misunderstandings on this score as well, it was as he put it ‘to see Truth that is God, face to face in this very life’ the one he was then living. None can deny by the manner of his passing away, that he had achieved his ambition.

However, the chapter goes on to discuss at length his impact on Tamil, Telugu, Gujarati, Marathi, Punjabi, Kannada, Malayalam, Assamese, Bengali and Oriya literatures.

This is perhaps from an Indian’s point of view the most useful chapter in the book, for one was not ordinarily aware of it, and one had unconsciously associated Mahatma Gandhi somehow with the English language and it was largely his own writings in English that held one’s attention. The great Kerala poet, Vallathol Narayana Menon, poet

laureate of Kerala, wrote his monumental SAHITYA MANJARI on the freedom struggle under Gandhi's leadership. 'Men were yearning for a new life'. Vallathol became the interpreter of this yearning.

This book is another one on Gandhi written in connection with the Gandhi Centenary Celebrations during 1969. Bhabani Bhattacharya is an established Indian writer whose works command respect and attention.

The author appropriately raises in the 'preview' the question—what is a writer? and proceeds to answer that .... he who wields words effectively for a creative purpose is a writer, beyond doubt.

Undoubtedly, from this point of view, Gandhi was a writer. He edited 'Young India' and 'Navjeevan', his great mouthpieces in the glorious days of the non-cooperation movement during the two great decades of the first half of this century of revolutionary change. His story of My Experiments with Truth, 'Thoughts on Gita', his innumerable talks in innumerable villages and towns spread over the length and breadth of India, the cool, calm passion with which he wrote and spoke won for him a unique position in the hearts and minds of his fellowmen. Such a man, when he takes to writing, will at once endow his writings with a glow and attractiveness born out of the character and depth of feeling behind it. It makes it quite different from anything one has seen or read or heard of before.

What an hornet's nest this one man had raised in the minds of not only the intellectual few, but in those of the ordinary many, and not only in his life time, but beyond and since?

A Vivekananda, a Gokhale and a Tagore had of course paved the way for the arrival of a Gandhi, but who could have anticipated that the Gandhi they had so fervently hoped for, and prayed for, would turn out to be what he was?

Surely, if Swami Vivekananda was known in America as the "Cyclonic Hindu" what epithet would suffice Gandhi? The 'Tornado Gandhi'—"the Hurricane Hindu?"

What an upsetter of fondly-held conventions and conventional thinking he turned out to be in his lifetime. He had jerked the Hindu mind and in the process, unhinged a few. But it was largely a benevolent jerk and largely benevolent results have followed.

The book consists of a variety of chapters not all of them perhaps relevant to this subject of Gandhi as a writer. But the reviewer at once acknowledges that it is not possible to departmentalise Gandhi and that it is necessary when one considers the various aspects of Gandhi to consider them as one whole. From such a point of view alone can such chapters as "Visit to Romain Rolland", "Dialogue with Tagore", "The Hymns & Songs He Loved" be fitted into this book on Gandhi as a writer.



"I would have taken three days in drafting this reply. Gandhiji did it in fifteen minutes", So C. R. Das is reported to have told his wife in Darjeeling in June 1925, on an occasion when Mahatma Gandhi was a guest at their house. This coming from the great Deshbandhu himself is unique indeed.

Even at the risk of oversimplicity, one may perhaps state that the basis to such faculty appears to be powers of concentration on the task in hand.

Altogether a very delightful and readable book written in a breezy conversational style with a useful chronology followed by copious notes and a full index at the back.

D.A.K.

#### TRUTH AND NONVIOLENCE

ED BY T.K. MAHADEVAN

(Published by Gandhi Peace Foundation, New Delhi, 1970) pp. 385 Price Rs. 15.00

'TRUTH and non-violence' is a record of the discussions at the Unesco Symposium held in Paris in October, 1969 and is published by Gandhi Peace Foundation on behalf of India National Commission for Co-operation with Unesco.

The get-up of the book is attractive and, as it ought to be with anything connected with Gandhi, simple and unostentatious.

Some of the very eminent writers and thinkers of the present day world took part in the discussions as is evident from the galaxy of names mentioned. Rane Meheu, Philip Noel-Baker the Nobel Peace Prize winner, Prem Purachatra of Thailand, Radivoj Uvalic from Yugoslavia, Firad Bustany from Lebanon, Yasuaki Nara, Prof of Sanskrit of Japan, Olivier Lacombe, Prof of Philosophy Paris University, Carlos Romulo from the Philippines, and a host of other distinguished names from intellectual and educational fields, the world over.

There is a short write-up about each of the participants at the end of the book and before the index. The reader would do well to read this up before embarking on the main theme. It would perhaps have been better if these short write-ups were given in the main body of the book as and when individual speakers got up to speak, as it were. The debate, or the Symposium as reproduced in book form would then have perhaps come up more alive than it does.



Quite appropriately, anything connected with Gandhi today could hardly do without the active help and cooperation of G Ramachandran, one of the few remaining 'Gandhians'. Readers may know that Deenabandhu CF Andrews had first introduced G Ramachandran to Gandhi in the mid-twenties when the latter was a student at Tagore's Shantiniketan and had gone on to become one of the leading exponents of Gandhian thought and concepts in the present day world. His interventions in the debates at Paris in October, 1969—the Centenary year of Gandhi's birth were, it will be seen, effective, brief, and to the point.

For example, he states on page 97, "Having lived and worked with Gandhi very closely and having studied him for the last thirty years, let me make it clear that Gandhi's roots were deep in the culture and tradition of India.....that enabled him to open out his mind to every influence from every part of the world. He grew with the years." And again (page 98) "Gandhi was not a kind of namby-pamby man. He was not a sentimentalist, talking only soft language and trying to please everybody—a very good fellow, as one might say. Those of us who knew him—that he was a very formidable person, that there was steel in him, that his non-violence was not something which said yes, yes, to everybody, to please everybody..." Such and other delightful anecdotes are to be found in this book about a very human man, full of laughter and mirth, of humility, inspite of all the steel in him.

Reading the speeches of some of the participants it is clear that Mohandas Karamchand Gandhi (that great Indian himself despised the appellation of Mahatma to his name) is beginning to make an even greater impact on the world a quarter of a century after his passing away, than he did when he 'trode this earth, staff in hand.'

A great and glorious figure this little man was, is and will continue to be, a blessing unto his kind, with his relentless quest to 'wipe every tear from every eye'; who are we to write or speak about him? Surely only a Gandhi can know what a Gandhi was?

Nevertheless it is an interesting Symposium and for an Indian it boosts up his ego no end to know that a fellow Indian has so captured the minds of many millions the world over even though perhaps, as with all prophets he was stoned in his own country. Finally it may be wrong to say so in this connection, yet the thought cannot escape one "ingratitude to their great ones, is the hallmark of strong peoples". Could one say so in the case of Gandhi and Indians?

Only three aspects of this unique, versatile man of God have been considered at the Symposium, viz

- (a) the relations of truth and non-violence in Gandhi's thinking;
- (b) the application of the principles resulting therefrom, and;
- (c) the significance and implications of these principles in the world today.

But as it is not possible to compartmentalise Gandhi's life and thought it is inevitable that other aspects such as untouchability, caste system, freedom for India, spinning Khadi, medicine and others in so far as they concerned the poor and the destitute have also been mentioned, thus considering the man's personality as a whole.

What a problem he must have been, not only to those around him—simple rustics that we were—but also to every one else to have had this astonishing character planted in their midst. The link that bound him to all living things in and outside India was, as is well-known, pure human love, supreme selfless, unselfish for all 'that lives and breathes' to quote a saying connected with the great Buddha.

Unesco honoured itself in honouring a great name which stood in no such need.

A well worthwhile book which has brought out the essentials and erudition of the discussions at the Symposium in Paris.

D.A.K

## SECRETARY'S NOTES

### Members Address

Copies of the Journal posted to members are sometimes returned undelivered by the Post Office with remarks such as 'the addressee has been transferred,' etc. This appears to be on the increase and the only way to rectify it is for the members to drop a line to the Secretary whenever their addresses change due to promotion, transfer, etc. It is of the utmost importance that the Institution should have the up-to-date addresses of all its members.

### Annual Subscription

Although the Institute's year 1972 is now ten months old, I regret to say that there are still many members who have not yet paid their subscription which was due on the 1st January last. Could I therefore request all members who have not yet paid their subscription for the current year, to let me have their remittance by return of post.

### Library Books

There are many instances where members keep books for 2 or 3 months in spite of reminders. It would help the Librarian considerably if members ensure the return of books to the Library within one month of their receipt or immediately on their recall.

### NEW MEMBERS

From 1st July 1972 to 30th September 1972, the following new members joined the institution :—

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ATARIWALA, G.S., Major  
ATHAWALE, S.G., Captain  
ATMA SINGH, Major  
AUTAR SINGH, Major  
BAJPAYI, S., Major  
BAJWA, I.J.S., Major  
BANSAL, A.K., Major

BASWANI, S.P.S., Major  
BEHL, T.S., Major  
BHANDARI, K.S., Major  
BHANDU, T.K., Major  
BHATIA, K.S., Major  
BHATIA, R.C. Major  
BHUPENDER SINGH, Major  
BISWAS, S., Major  
CHATRATH, V., Major

CHATURVEDI, B.K., Captain  
CHAWLA, B.K., Captain  
CHEEMA, A.S., Major  
CHENGAPPA, K.C., Major  
CHHIBBER, V., Major  
CHOPRA, B.R., Flt. Lt.  
CHOUDHARY, S.K., Captain  
DARSHAN SINGH, Major  
DHANKAR, S.S., Sqn. Ldr.  
DHILLON, B.S., Captain  
DHILLON, I.P.S., Major  
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DUBEY, P.M., 2/Lt  
GAUTAM, S., Sub-Lt  
GHOSH, P.K., Major  
GILL, H.S., Lt.  
GOEL, P.K., Captain  
GREWAL, S.S., Major  
GURMEET SINGH, Major  
HANDA, V., Captain  
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HARI TATS, V.D., Major  
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JOHAR, M.L., Captain  
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KARIAPPA, B.A., Major  
KATARIA, B.S., Major  
KATYAL, O.P., Captain  
KEWLANI, I.C., Major  
KHAN, M.M. Major  
KHARE, K.N., Captain  
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KOLHATKAR, A.K., Major  
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MEHAR SINGH, Major  
MEHRA, J.C., Captain  
MEHTA, B.M., Major  
MEHTA, N.S., Major  
MISHRA, V., Captain (LIFE)  
MITRA, C.K., Captain  
MUKHERJEE, A., Major  
MUKHIA, S.K., Major  
NAGARAJ, V.K., Captain  
NAIK, M.K., 2/Lt.  
NAIR, K.P.D., Captain  
NAMBIAR, B., Captain  
NANDA, S.P., Major  
NARULA, P.S., Major  
NATH, D., ASHOK  
NATHU SINGH, MAJOR  
PALIWAL, S.C., Captain  
PANDARINATHAN, V. Major  
PARMOD KUMAR, Major  
PARTHASARATHY, T., Flt. Lt.  
PRIANI, K.L., Sqn. Ldr.  
RAI (PARJIT), Major  
RAJAN, R.G., Captain  
RALLI, V.K., Major  
RAMESH CHANDRA, Captain  
RAMRAHIANI, L.G., Captain (LIFE)  
RANBIR SETHI, Major  
RANGASWAMI, V., Brig.  
RAO, H.K.S., Flt. Lt.  
RAWAT, K.S., Captain  
RISHI RAJ, G.S., Captain  
ROBERT, C.A.W., Sqn. Ldr.  
RUHIL, H.R., 2/Lt. (LIFE)  
SACHDEV, C.M., Captain  
SAHARAN, A.S., Captain  
SAMUEL, R.J., Major

SANAN, K.K., Major  
 SETHI, A.K., Major  
 SETHI, M.P., Major  
 SHARMA, S.L., Captain  
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 SINGH, H.P., Major  
 SINGH, J.V., Major  
 SINGH, M.M., Captain  
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 SODHI, I.S., Captain

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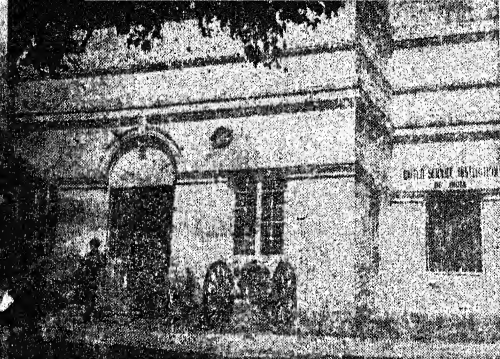
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